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# AIR CONDITIONING AND REFRIGERATION News

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## INSIDE DOPE

by GEORGE F. TAUBENECK

**Where Was I Last Summer?**
**Hemispheric Solidarity**
**Poetry Corner**
**Definition of 'Free Enterprise'**
**Hot Weather Item**

### *Where Was I Last Summer?*

A small town lad paid his first visit to New York City. After attending a number of Manhattan's famous night spots with his uncle, who was an indulgently wealthy resident New Yorker, this youngster was presented with the *piece de resistance* —a night at the magnificent Metropolitan Opera.

The refugee from Three Corners was intrigued no end by the performance he witnessed. He sat on the edge of his seat, and he viewed the showing of busts and bustles with incalculable enthusiasm.

His uncle, pleased by the boy's uncontrollable happiness, asked:

"Have you ever seen anything like this show?"

"Gosh, no!" ejaculated his nephew. "At least, not since I've been weaned!"

### *Hemispheric Solidarity*

Now that Germany and Japan have been erased from the competitive picture, the Brazilian market offers a shining opportunity for United States trade—and, consequently, for political solidarity.

Brazil's industrial progress during the war years has been amazing, and has resulted in a sharp boost in that country's over-all purchasing power. These factors, coupled with the extreme scarcity of goods available to Brazilian buyers, have placed Brazil high on the list of opportunities for American exporters.

Other Latin American markets are good export bets, too. However, each of these various markets for our goods require minute and detailed study, because of their widely differing economic conditions, education levels, social customs and climates.

One Latin American nation may have a literacy rate of 80%, while only 20% of its neighbor's population is able to read and write. There's a language barrier which must be hurdled by American exporters, too. For example, in Brazil, Portuguese is the native tongue, while the majority of the South-of-the-Border countries speak Spanish in somewhat different versions. And yet, on the islands of Haiti and Tahiti, French is the medium of discourse.

One great disadvantage for the promotion of trade with these countries is the fact that they have no middle-class consumer group. Either these peoples are very rich or desperately poor. However, due to the rapid rise of industry and education they have enjoyed in recent years, the Latin Americans are undergoing a great economic transfiguration. Subsequent shifts in the pattern of income-groups are taking place. Suffice it to say that these alterings of income-levels will bear watching by those interested in trading with our Good Neighbors to the South of us.

Once the American manufacturer who realizes that he has potential and profitable customers in this expansive South American area decides to promote this plus-business, he is faced with the problem of selecting an advertising medium through which he may broadcast his message. Some of these nations, such as Argentina and Mexico, do have widely circulated and widely believed periodicals. But few others can present advertising media which would be of real value to the exporter. Here, apparently, is an opportunity for American publishers.

*(Concluded on Page 6, Column 1)*

## *Freezer Men Map Publicity Drive*

CHICAGO—Early approval of a public relations program to acquaint consumers with the uses of home freezers is anticipated by the Farm and Home Freezer Manufacturers Association following its fall meeting at the Hotel Sherman here.

During the gathering, which attracted a record attendance, a committee was appointed to look into the matter of public relations generally and to investigate the possibilities of an affiliation with other refrigeration groups in a concerted publicity campaign.

The committee was also instructed to devise means whereby a comprehensive report of freezer production may be made available.

Members of the committee are H. R. Roberts, Whiting Corp.; R. H. Bishop, R. H. Bishop Co.; F. J. Bommer, Sanitary Refrigerator Co.; J. E. Wilson, Jr., Wilson Cabinet Co.; T. S. Pendergast, Universal Cooler; and J. K. Noel, Jr., Victor Products Co.

The group will present its report by Oct. 1. Final action will be taken at a meeting of the association in Chicago Oct. 15.

A recommendation that FHFMA sponsor a public relations program was made at the fall meeting Aug. 13 by a committee appointed earlier to study the matter. Methods for educating the public on the preparation of foods for proper freezing and the use and care of freezers were discussed by Hugh Burras, Sills, Inc., and Dr. Donald K. Tressler.

## Hickock Named Baker General Sales Head

SOUTH WINDHAM, Me. — Appointment of H. C. Hickock as general sales manager of the Baker Ice Machine Co., Inc. has been announced by Ross Rathbun, president of the company.

Mr. Hickock comes to Baker from the position of central district manager of the Sturtevant Division of the Westinghouse Electric Corp. A native of Massachusetts and a graduate of Worcester Polytechnic Institute, he served as a Naval officer in World War I, after which he joined Westinghouse. With Westinghouse, he engaged in a broad field of technical and sales activity which has fitted him uniquely for his new responsibility.

## Industry Ponders Effects Of GM Action on Steel

DETROIT—The announcement by C. E. Wilson, head of General Motors, that steel shortages would curtail production schedules and close a number of the corporation's automotive plants next week or the following week, was arousing speculation in industry circles as to whether or not the steel situation might lead to some curtailment in refrigeration and appliance production.

The announcement by the General Motors chief executive officer brought a demand from labor leaders that the Federal Trade Commission expand its price-fixing probes of the steel industry to include "restriction of production and production capacity."

The FTC last weekend issued a complaint against the major iron and steel producers for engaging in a "wrongful and unlawful" combination and conspiracy to fix prices and destroy competition in iron and steel products.

The government agency's complaints listed six major "acts and practices" which allegedly deprive the public of the benefit of competition, promote discrimination against some buyers and users of iron and steel, and frustrated competition in the industry.

## Philco Buys Rex Plant In Latest Expansion Move

PHILADELPHIA — In a further expansion of its refrigerator and freezer division, Philco Corp. is acquiring the production facilities and all other assets of the Rex Mfg. Co., Inc. of Connersville, Ind., announces John Ballantyne, Philco president.

For the past several years, Philco has purchased the entire refrigerator output of the Rex plants and has had an investment of $973,000 in the preferred stock of that company.

In acquiring the Rex company, Philco will issue a net total of 51,993 shares of its $3 par value common stock which has been authorized but not issued. Net income of Rex for the past 12 months is substantially in excess of earnings on the additional Philco shares to be issued.

Operations of Rex will continue without any change under the direction of the present executive management, and no changes in policies or personnel are contemplated.

In 1946, sales of refrigerators and freezers amounted to nearly 25% of total Philco volume, Philco officials declared. The plant facilities now being acquired combined with the large new Philco refrigerator-freezer plant in Philadelphia give Philco a refrigerator production capacity several times as great as in 1941.

## *Company Reports 1947 Sales and Income Gains*

PHILADELPHIA — Net income from operations of Philco Corp. in the second quarter of 1947 totaled $1,626,974 after all taxes and charges including an inventory reserve of $1,200,000, and reserve for future research expenditures, and was equivalent, after preferred dividends, to $1.12 per share of common stock, reports John Ballantyne, president.

In addition, there was net nonrecurring income of $798,147 after taxes, or 58 cents per common share, so that total earnings for the quarter amounted to $2,425,121 or $1.70 per share after preferred dividends.

In the first quarter of 1947, net income totaled $1,609,754 after taxes

*(Concluded on Page 4, Column 1)*

## *Electrical Goods Sales At Wholesale Up 120%*

WASHINGTON, D. C. — Sales of electrical goods at wholesale during the first six months of 1947 were 120% over the same period last year, announces the Census Bureau of the U. S. Department of Commerce.

Sales by independent retailers for the month of July only also showed a gain over 1946, being 9% ahead.

## *Air Conditioning Is Dream of Auto Plant Heads as Heat Stops Workers*

DETROIT — As the Midwest perspired through its third successive week with mercury in the mid-90's, factory managers were beginning to wonder why they had never installed air conditioning.

For as the temperature got higher, production got lower.

By way of example, during the second week of the heat wave, so many foundries shut down that the Gray Iron Founders Society estimated August castings output dropped 5%.

In the field of automobile production the situation was even worse. Walkouts and shutdowns resulting from overheated plant facilities resulted in an estimated loss in production of 6,000 passenger cars the first week of the torrid spell and twice that the second week.

Even last week more than 26,000 automobile workers stayed away from plants where there was no air conditioning. Biggest loser was Chrysler Corp. where 22,185 men were said to be idle.

As the week ended with little relief in sight, some manufacturers figured they might well take a tip from the local movie houses where air conditioning is generally in use. Most shows were packed during the heat wave and the reason was obvious.

## *Household Sales Hit 291,464 In June*

NEW YORK CITY—World sales of household electric refrigerators in June by the 11 manufacturers who report their sales to the Household Refrigeration Section of Nema totaled 291,464 units.

This compares with the 281,252 household refrigerators sold by these producers in May.

For the first six months of 1947 the 11 firms sold a total of 1,477,191 units.

Sales by states totals (these are by distributors and dealers) for the *first quarter,* just released, reveal a total of 555,890 units sold, with New York well in the lead with 57,562 units. Pennsylvania was second with 46,104 units, California third with 40,395; Illinois fourth with 38,226; and Ohio a close fifth with 38,220.

| | June | First Six Months |
|---|---|---|
| Domestic (48 States & D. C.) | 273,531 | 1,384,916 |
| Canadian | 1,234 | 7,250 |
| Other Foreign | 16,699 | 85,025 |
| **Total** | **291,464** | **1,477,191** |

## Club Diner Shut After Spoiled Food Poisons Guests at Reception

YPSILANTI, Mich. — Officials of the Washtenaw Country Club hastened to improve allegedly inadequate refrigeration facilities after the club's dining room was closed last week when between 50 and 100 persons were stricken with food poisoning at a wedding reception there.

The closing was ordered by the county health director, who accused the club of ignoring repeated warnings that the refrigeration equipment was insufficient. He said improper refrigeration allowed the development of staphylococcus bacteria in chicken salad sandwiches served at the reception.

Henry J. Helle, manager of the club, admitted the organization had received a letter from the board of health "saying that our refrigeration is inadequate.

"The board of directors is meeting today to determine what steps shall be taken toward correct refrigeration," Mr. Helle told reporters. "It is believed the food was not kept cold enough to prevent bacteria from growing."

Besides the chicken salad sandwiches, guests ate ham sandwiches and cake.

"It is unfortunate that these people were served the worst types of food for hot weather," commented Dr. Frederick Leder, head of the disease department of the State Health Department. "In such sandwiches poisons readily develop if the food is not strictly refrigerated."

Although none of those stricken was reported seriously ill, three required hospital treatment. Many of the rest were treated by private physicians.

## Frigidaire Ups Some Models From $5 to $15

### *Half of Commercial, Air Conditioning Products Prices Also Increased*

DAYTON, Ohio — Price increases on some refrigerators, ranges, the automatic washer, and some commercial refrigeration and air conditioning products have been announced by Frigidaire Division, General Motors Corp.

Refrigerator prices are up $5 to $15 except on three models, which remain the same. Three of the five electric range models have been upped $5 to $10, while the automatic washer price has been increased $15.

Prices on Frigidaire's home freezers, electric dryers, and ironers remain the same.

Approximately half of the more than 200 products in the commercial refrigeration and air conditioning category have been adjusted upward, on the average, by approximately 2½%.

In announcing these price increases, P. M. Bratten, general sales manager, explained that the price boosts reflect advancing costs in materials and losses caused by irregular production due to material shortages.

"It has been our earnest hope that Frigidaire continue its current price schedules despite mounting costs of production," he said. "This hope, however, could not be realized because many of the items we buy cost more than they did just a short time ago. Also, material shortages are preventing our reaching anticipated production levels."

## *Phoenix Ordinance Sets Rules on Operation of Evaporative Coolers*

PHOENIX ,Ariz. — Installation of fresh air intakes within 8 ft. of vent openings or atop commercial buildings prior to approval by the city building inspector is prohibited under a new city ordinance regulating the operation of evaporative coolers and air conditioning equipment.

The ordinance, recently passed by the City Commission, is primarily a health measure. Plumbing Inspector R. L. Nellis pointed out that in the past, numerous residents have been incapacitated from sewer gas sucked into fans from roof-top vents.

Also banned by the regulation is the draining of waste cooler water into streets or curb gutters, on sidewalks or rooftops, or under any structure where it may cause settlement of foundations. However, drainage water may still be used for lawns.

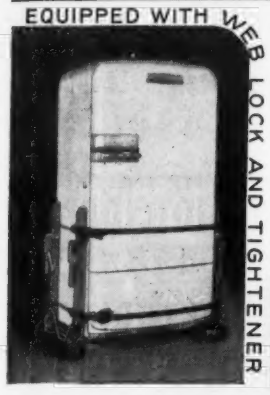
Violation of the ordinance is punishable by fines of not more than $300 or jail sentences of not more than 90 days, or both.

## Nelson In New Post At Grand Rapids Brass

GRAND RAPIDS, Mich.—George B. Nelson, former vice president in charge of sales for Winters & Crampton Corp., has been appointed general manager of Grand Rapids Brass Co., a subsidiary of Crampton Mfg. Co., Holland, Mich., it was announced last week.

At the same time it was announced that Crampton Hardware Co., another Grand Rapids subsidiary of Crampton Mfg. Co., is now being dismantled. Its automotive hardware department

*(Concluded on Page 28, Column 5)*

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**ROLL-OR-KARI DUAL TRUCKS**

Patented Step-On-Lift • Folding Handles
Capacity 1000 Lbs. • Shipping Weight 40 Lbs.

**WRITE TODAY • PRICE $35.00 F. O. B.**

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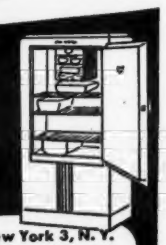
TRADED-IN **REFRIGERATORS** ...from 2 to 18 cu. ft.



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*A Continuous Reliable Source of Supply*


## 3 Wholesale Distribution Experts Picked To Judge $1,500 NAW Competition

NEW YORK CITY—Wroe Alderson, Prof. Ralph Alexander, and Prof. Harry R. Tosdal have been named to judge manuscripts submitted in the National Association of Wholesalers' $1,500 prize award contest.

The contest, which began in April and which will not close until Oct. 30, is open to contestants desiring to prepare articles of approximately 5,000 words dealing with the wholesale industry or any specific phase of wholesaling.

The judges were selected by the NAW Committee on Awards in cooperation with the American Marketing Association and those selected are experts in the field of wholesale distribution.

Rules of the competition may be secured from Chester C. Kelsey, Executive Vice President, National Association of Wholesalers, 200 Fifth Ave., New York City.

## *Westinghouse Shows Single-Dial Laundromat*

Miss Lois Ferris, Pacific Coast district home economist for Westinghouse Electric Corp., explains the simplified operation of the new single-dial Laundromat to W. F. Breuer, a dealer visiting during the recent Summer Market Week at the Western Merchandise Mart in San Francisco. It was the first showing of the new model.

*The HEIGHT*
**OF LOW-COST SERVICE!**

**INLAND *TILT OUT* ICE CUBE TRAY**

**(Available in single tray as shown or in double-duty Dessert tray size . . . with or without Pan Lifter)**

Economy! Utility! Convenience! The Magic Finish Inland Tilt Out Ice Cube Tray combines *all three*. That's why makers of automatic refrigerators and dealers are finding it a sales favorite everywhere.

It's simple and easy to quickly release full-size ice cubes—2 at a time or a trayful—with the operating lever illustrated above. What's more, this economical tray freezes ice cubes in a jiffy.

Find out more about this great value in modern ice cube trays.

*For full particulars and prices write to—*

**INLAND MANUFACTURING DIVISION, *General Motors Corp., Dayton, Ohio***

*FAST FREEZING*
*QUICK RELEASING*
**ICE TRAYS *BY* INLAND MANUFACTURING**
INLAND


## Telecoin Corp. Scores Action by Bendix Co-Trustees To Obtain Shares of Stock

WILMINGTON, Del.—Claims made in an action filed in U. S. District Court by two co-trustees of 100 shares of Bendix Home Appliance common stock to secure for Bendix certain Telecoin Corp. stock are without "the slightest merit," Telecoin asserts.

The co-trustees are R. L. Berner and M. V. Leventritt, both of New York. Their action seeks to obtain for Bendix the Telecoin stock owned by Appliance Development Corp., Judson S. Sayre, Bendix president, and Eugene R. Farny, a Bendix director and chairman of Telecoin.

The Court is asked also to:

1. Secure for Bendix money and property which Appliance Development Corp. may have received in exchange for shares of Telecoin.

2. Order formation of a trust in favor of Bendix on both counts noted above.

3. Order Mr. Sayre, Mr. Farny, Telecoin, and Appliance Development to account to Bendix for all money, benefits, and profits received by them for the commercially operated home laundry business.

4. Cancel a contract allegedly existing between Bendix and Telecoin which is said to contain a provision whereby Bendix would attempt to modify agreements with distributors so it would sell its machines for coin operation or multiple patrons' use to Telecoin only.

Telecoin declared in a formal statement that it had acted as a sales distributor for Bendix in a special field created and developed by Telecoin without any assistance from Bendix or any other organization. Telecoin said it had not only opened up "a vast new market" for Bendix but had "rendered Bendix incalculable service in promoting its product for which Telecoin has not received any compensation.

"At all times, Telecoin has bought Bendix home laundries at the same price as others, and has had no special advantages from Bendix so far as prices were concerned," the statement asserted.

## Stoker Sales Rise 12% In June

WASHINGTON, D. C.—A total of 6,121 mechanical stokers were sold during June, an increase of approximately 12% over May, the U. S. Bureau of Census has reported.

Those sold for residential use, other than small apartments, numbered 5,221, or only 40% of the number sold during the same months last year, the Bureau added.

Those sold for use in small apartments and commercial heating plants amounted to only 61% of those sold in June, 1946, it said.

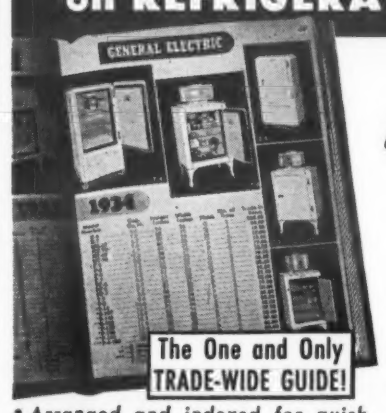
## *Texas Appliance Chain Opens 2 Stores In Houston*

HOUSTON, Tex.—Flato's appliance stores of Houston and Corpus Christi have opened a second branch here at 2008 Yale in the Heights, and a third store at 6803 Harrisburg.

Occupying 30 x 30 ft. of space in a building leased from Cities Service Corp., the Yale street store has been entirely remodeled.

The Harrisburg store occupies 1,200 sq. ft., with site and construction costing an estimated $40,000.


**The STANDARD Reference Manual on REFRIGERATORS and FREEZERS**

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- More than 1150 photographs
- More than 3300 model specifications
- Authentic trade-in valuations for all household refrigerators marketed since 1928
- Operating data on Merchandising, Promotion, Reconditioning

*• Arranged and indexed for quick reference.*
*• All appraisals have been revised to reflect current market factors.*

***Use the Standard Manual to identify and evaluate every refrigerator and freezer accurately.***

**Bookbound in washable green cloth—320 pages. Pocket Size—4¾" x 6¼". Price—$6.00**

*NOTE — A limited quantity of current (1946) edition still available for immediate delivery.*

STANDARD REFRIGERATOR TRADE-IN MANUAL CO. 503 W. 43rd St., N. Y. 18, N. Y.
Please enter my order for_____copies of 1947-1948 Manual @ $6.00 each.
Please send me at once_____copies of 1946 Manual @ $5.00 each.
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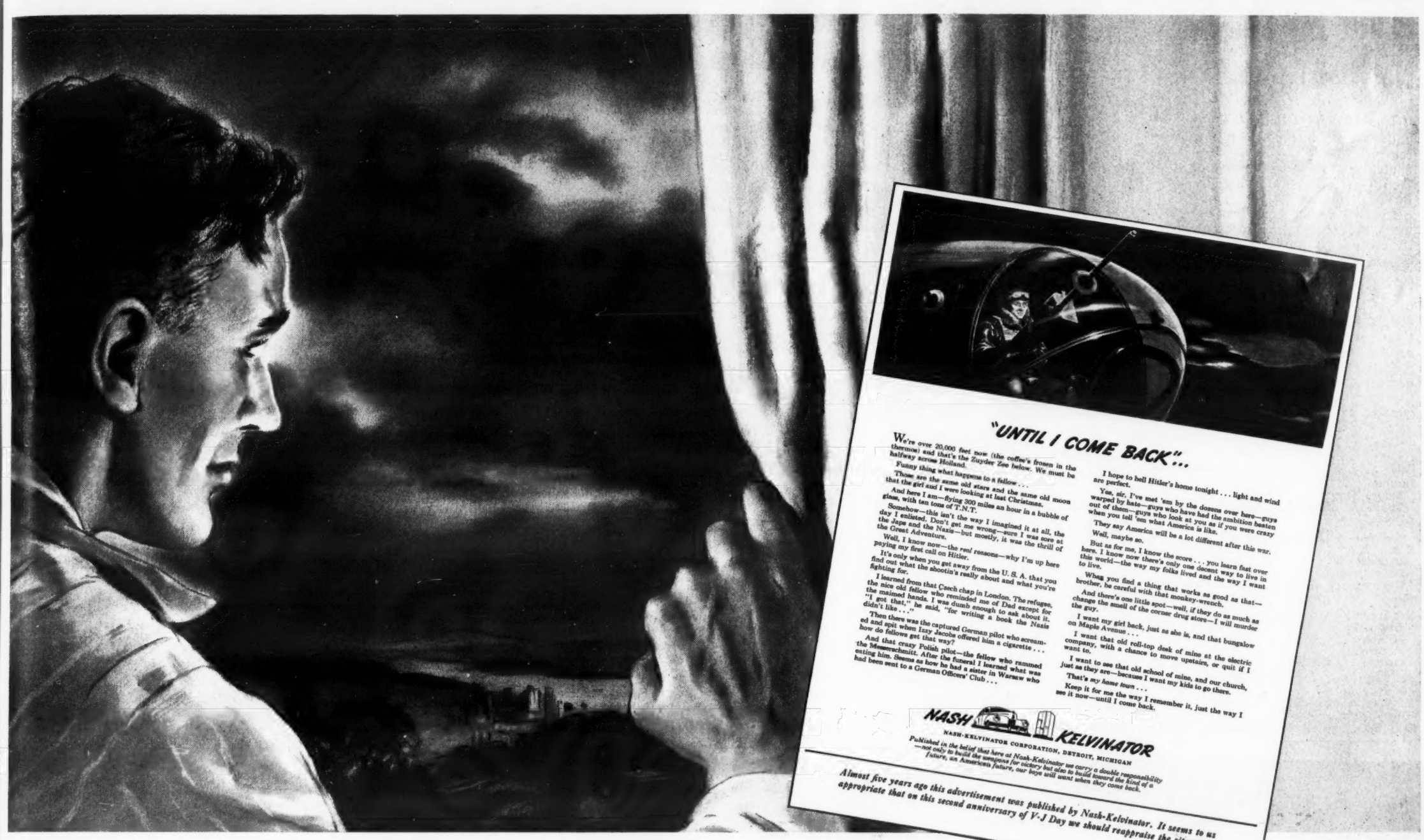
STREET ADDRESS_____
CITY_____ ZONE_____ STATE_____
*Check or Money Order enclosed* ☐ *Bill us per enclosed purchase order* ☐
*(We pay postage on prepaid orders.)*


"UNTIL I COME BACK"...
We're over 20,000 feet now (the coffee's frozen in the thermos) and that's the Zuyder Zee below. We must be halfway across Holland.
Funny thing what happens to a fellow . . .
Those are the same old stars and the same old moon that the girl and I were looking at last Christmas.
And here I am—flying 300 miles an hour in a bubble of glass, with ten tons of T.N.T.
Somehow—this isn't the way I imagined it at all, the day I enlisted. Don't get me wrong—sure I was sore at the Japs and the Nazis—but mostly, it was the thrill of the Great Adventure.
Well, I know now—the real reasons—why I'm up here paying my first call on Hitler.
It's only when you get away from the U. S. A. that you find out what the shootin's really about and what you're fighting for.
I learned from that Czech chap in London. The refugee, the nice old fellow who reminded me of Dad except for the maimed hands. I was dumb enough to ask about it. "I got that," he said, "for writing a book the Nazis didn't like . . ."
Then there was the captured German pilot who screamed and spit when Izzy Jacobs offered him a cigarette . . . how do fellows get that way?
And that crazy Polish pilot—the fellow who rammed the Messerschmitt. After the funeral I learned what was eating him. Sheesa as how he had a sister in Warsaw who had been sent to a German Officers' Club . . .
I hope to hell Hitler's home tonight . . . light and wind are perfect.
Yes, sir, I've met 'em by the dozens over here—guys warped by hate—guys who have had the ambition beaten out of them—guys who look at you as if you were crazy when you tell 'em what America is like.
They say America will be a lot different after this war.
Well, maybe so.
But as for me, I know the score . . . you learn fast over here. I know now there's only one decent way to live in this world—the way my folks lived and the way I want to live.
When you find a thing that works as good as that—brother, be careful with that monkey-wrench.
And there's one little spot—well, if they do as much as change the smell of the corner drug store—I will murder the guy.
I want my girl back, just as she is, and that bungalow on Maple Avenue . . .
I want that old roll-top desk of mine at the electric company, with a chance to move upstairs, or quit if I want to.
I want to see that old school of mine, and our church, just as they are—because I want my kids to go there.
That's my home town . . .
Keep it for me the way I remember it, just the way I see it now—until I come back.
NASH KELVINATOR
NASH-KELVINATOR CORPORATION, DETROIT, MICHIGAN
Published in the belief that here at Nash-Kelvinator we carry a double responsibility—not only to build the weapons for victory but also to build toward the kind of a future, an American future, our boys will want when they come back.
Almost five years ago this advertisement was published by Nash-Kelvinator. It seems to us appropriate that on this second anniversary of V-J Day we should reappraise the situation.

# Before it is too late

I remember the cheers at Okinawa when the word came through. It was V-J Day—the war was over! Peace had come, this time for keeps.

*A wonderful new world was on the way . . .* remember?

I got to thinking about it last night, about what's happening —and I couldn't sleep.

Beyond our town I seemed to see the lights of all the world. And as I watched, they were going out one by one.

I saw the foundries grow cold against the moon, the wheels stop in the factories.

I saw the printing presses smashed, and free people taken away and shot.

I saw the rise of the dictators.

I saw their lines of puppet men jerking to the polls, while bands played and banners waved.

Yes—the disciplined state had come.

*"Turn on your radio, comrade. The orders for the day are coming through . . ."*

*"Turn over your children to us. We will indoctrinate them for the state . . ."*

*"Your union is no longer necessary. Your hours, your rations and your work have been set by the bureau . . ."*

*"Tear up the ballot. You have no need for it now . . ."*

I want to thank God today that I live in America.

That I can still speak my own mind and do as I please, work as I please and vote as I please . . . that the way ahead of me is still wide open.

Now I know how easily these priceless privileges can be lost.

* * *

I have a young son and this is what I'm going to tell him—

*If you cannot learn to discipline yourself, there will always come a tyrant to teach you.*

*—It takes spunk and sweat to become a good American citizen. Don't let anybody try to tell you differently.*

*—You'll never find peace in any doctrine that preaches violence to prove its point.*

*—You'll never be happy under any kind of government that denies the love of God and the natural goodness of man.*

*—You'll never get ahead in any scheme of life that puts a halter on your initiative and your ingenuity.*

*Above all, beware the man—whether he is a Right or a Left, or the Middle, or of the Proletariat or whatever label he wears —if he tries, under any pretext, to trade you out of any of your rights as a citizen*—he is a tyrant, *who will take away all your liberties, one by one.*

* * *

No, I don't think it's going to happen in America.

But make no mistake about it. The danger is still there.

We have been challenged to prove the stuff we are made of—to prove that the way we live and work beats that of any other system in the world.

And there's only one way to prove it. That's to produce the goods . . . before it is too late.

We've got to bury our little squabbles, and start pulling together.

We've got to set our wheels in a *new high*—and keep them rolling.

We've got to quit looking back to 1939, or '29—and start building a many-times-greater America.

We've got to plant more wheat and raise more corn. Dig more coal and roll more steel. Build more, make more.

It's *got* to be done—not only to bring back the lights of Europe, but because it is our *only* salvation—

—because it is the American way, to ever increase our ability to bring better living to more people.

—because only by being productive can we be strong—

*And only by being strong can we remain free!*

**Nash-Kelvinator Corporation**

*NASH MOTOR CARS—KELVINATOR AND LEONARD HOME APPLIANCES*

*This advertisement, released by Nash-Kelvinator Corporation on the second anniversary of V-J Day, August 14th, has caused such wide-spread comment that we are reprinting it here in the pages of the magazine of our Industry. Copies of the original advertisement will be mailed to you on request. Address Nash-Kelvinator Corporation, Detroit 32, Michigan.*

# Philco 2nd Quarter Net Is $1,626,974

*(Concluded from Page 1, Column 3)*

and charges including an inventory reserve of $1,300,000, and was equivalent to $1.10 per share of common stock after allowing for preferred dividends.

In the second quarter of 1946, when operations were just beginning to recover from reconversion difficulties, net income was $14,787.

Sales (including excise taxes) in the second quarter of 1947 amounted to $57,754,000 as compared with $50,187,000 in the first quarter of this year, and $22,861,000 in the second quarter of 1946.

Operating results for the second quarter of 1947 and comparison with the first quarter of 1947 and second quarter of 1946 follow:

| | 2nd Quarter 1947 | 1st Quarter 1947 | 2nd Quarter 1946 |
|---|---|---|---|
| Sales | $57,754,000 | $50,187,000 | $22,861,000 |
| Income before Taxes | 4,997,088 | 4,527,654 | 164,787 |
| Inventory Reserve | 1,200,000 | 1,300,000 | ..... |
| Research & Product Development Reserve | 375,614 | ..... | ..... |
| Taxes | 1,794,500 | 1,617,900 | 150,000 |
| Net Income Exclusive of Non-Recurring Items | 1,626,974 | 1,609,754 | 14,787 |
| Net Non-Recurring Income, after taxes | 798,147 | ..... | ..... |
| Net Income | $2,425,121 | $1,609,754 | $14,787 |

## *Shifts to Baker*

**H. C. HICKOCK**
**He has been named general sales manager for Baker Ice Machine.**

## Record Heat Cuts Sales 11% For N. Y. Department Stores

NEW YORK CITY—Due chiefly to the heat, department store sales here dropped 11% in the week ending Aug. 16 compared to the same week last year, according to the Federal Reserve Bank of New York.

Sales were also 4% under 1946 for the four-week period ending Aug. 16.

Despite the heat (last year at this time temperatures averaged 77° F.), bargain sales were excellent, stated one department store here.

## Estate Names Dunn To New Sales Post

NEW YORK CITY—Advancement of Cecil M. Dunn to the newly created position of director of sales and advertising has been announced by John A. Seubert, vice president and general manager of the Estate Heatrola division, Noma Electric Corp.

Mr. Dunn has been general sales manager of this division for the past year. Previous to that he was assistant sales manager and promotion manager.

In order to assure the most efficient coordination of these functions with general sales management, Mr. Seubert stated that the executive sales offices of Estate Heatrola have been transferred, as of July 1, to the factory at Hamilton, Ohio. Mr. Dunn and his assistants are now located there.

## *Durable Goods Sales Dip In June for Wholesalers*

WASHINGTON, D. C.—A total of $1,700 million in durable goods was sold by wholesale dealers during June, the Commerce Department estimates.

This figure, which represents a 2% dip from the previous month, was reflected in a commensurate swelling of inventories during June. It compares with $1,239 in June, 1946.

General statistics for the month of June registered $4,842 million worth of sales by merchant wholesalers.

## *Dealers Push Freezers*

**Continuing its drive to sell home freezers, the Electric Appliance Dealers Association of Minneapolis-St. Paul ran this advertisement (nearly a full page) in five daily papers.**

## Proctor Ships Toasters To Dealers by 'Wire'

NEW YORK CITY — A simultaneous merchandising presentation throughout the nation was staged recently by Proctor Electric Co. when 486 electrical appliance distributors in 232 cities received via Western Union messenger service a sample of the company's first postwar product —an automatic toaster due to hit the market Oct. 1.

The activity took place at the same time as Proctor's presentation of the toaster to its own sales force in session at their first postwar national sales convention at Shawnee-on-the-Delaware.

Each distributor was presented with the product, advertising display material, a recorded message from Proctor headquarters, letters from Robert M. Oliver, vice president in charge of sales, and an orchid. The toaster, which was unboxed by the messenger, rested on a burgundy velour base set inside a transparent Plexiglas box and was accompanied by orchids.

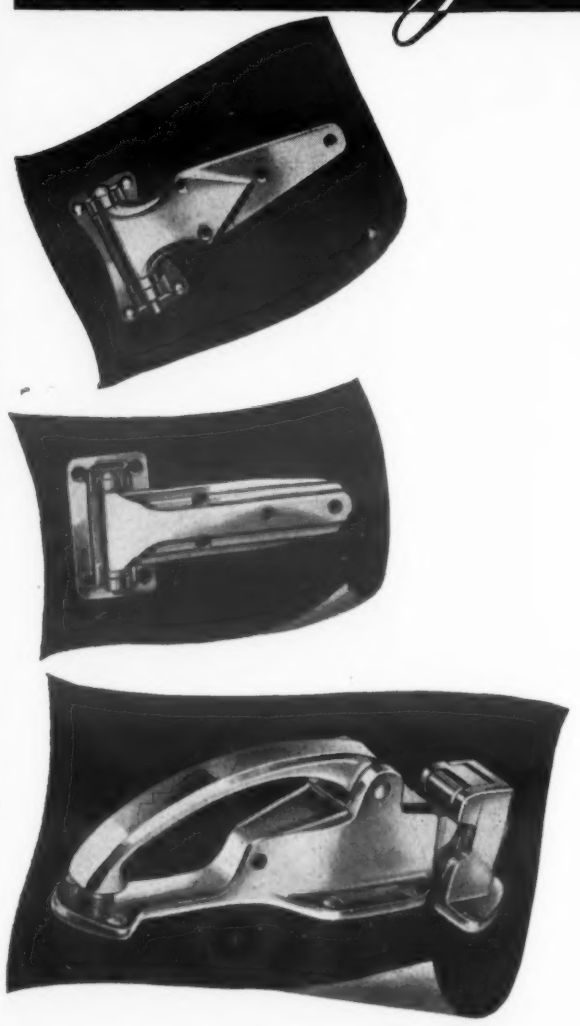
## Nema 1st Quarter Sales By States Hit 555,890

| States | Unit Sales |
|---|---|
| Alabama | 5,794 |
| Arizona | 1,945 |
| Arkansas | 4,294 |
| California | 40,395 |
| Colorado | 5,220 |
| Connecticut | 10,210 |
| Delaware | 1,156 |
| District of Columbia | 5,905 |
| Florida | 8,495 |
| Georgia | 8,852 |
| Idaho | 2,176 |
| Illinois | 38,226 |
| Indiana | 17,216 |
| Iowa | 10,705 |
| Kansas | 5,046 |
| Kentucky | 7,084 |
| Louisiana | 6,189 |
| Maine | 2,690 |
| Maryland | 7,594 |
| Massachusetts | 14,791 |
| Michigan | 26,403 |
| Minnesota | 11,549 |
| Mississippi | 3,997 |
| Missouri | 18,637 |
| Montana | 1,824 |
| Nebraska | 5,544 |
| Nevada | 964 |
| New Hampshire | 2,007 |
| New Jersey | 23,387 |
| New Mexico | 1,177 |
| New York | 57,562 |
| North Carolina | 9,209 |
| North Dakota | 1,535 |
| Ohio | 38,220 |
| Oklahoma | 6,174 |
| Oregon | 7,595 |
| Pennsylvania | 46,104 |
| Rhode Island | 4,035 |
| South Carolina | 4,109 |
| South Dakota | 1,845 |
| Tennessee | 9,797 |
| Texas | 26,566 |
| Utah | 2,922 |
| Vermont | 1,065 |
| Virginia | 8,460 |
| Washington | 9,404 |
| West Virginia | 7,681 |
| Wisconsin | 13,278 |
| Wyoming | 857 |
| **Total United States** | **555,890** |

The unit sales figures shown on this summary are not *Factory Sales* nor do they reflect the sales of *all manufacturers*—but rather *Distributor* and *Dealer* sales of only participating Nema companies.

### *Appliance Show Planned*

BEATRICE, Neb.—A refrigeration and home appliance show will be sponsored by the Beatrice Junior Chamber of Commerce in October.



Here is an effective union of new and old: all the trim, efficient beauty of smart modern designs — plus the ancient virtue of tough strength and reliability, that guarantees smooth, firm action and long, useful life.

You find here a complete line for commercial units.

*Write for catalog and prices.*

**ARCADE MANUFACTURING DIVISION**
ROCKWELL MANUFACTURING COMPANY, FREEPORT, ILLINOIS

PUFFER-HUBBARD GRAND HAVEN MFG. COMPANY MICHIGAN

*To Preserve it "PH" it with a* **REACH-IN** *Cabinet*

**PUFFER-HUBBARD**

ANOTHER CASE OF GOOD REFRIGERATION ENGINEERING

- Electric Welded Steel Frame
- Welded Interior Porcelain Lining
- Porcelain Exterior
- Exclusive Grad-u-matic Air Conditioning
- The only refrigerator with this patented feature

*Also Manufacture*
Dough Retarding Cabinets
Self Serve Vege-Cases
Dry Beverage Coolers
Self Serve Dairy Cases
*Write* for information

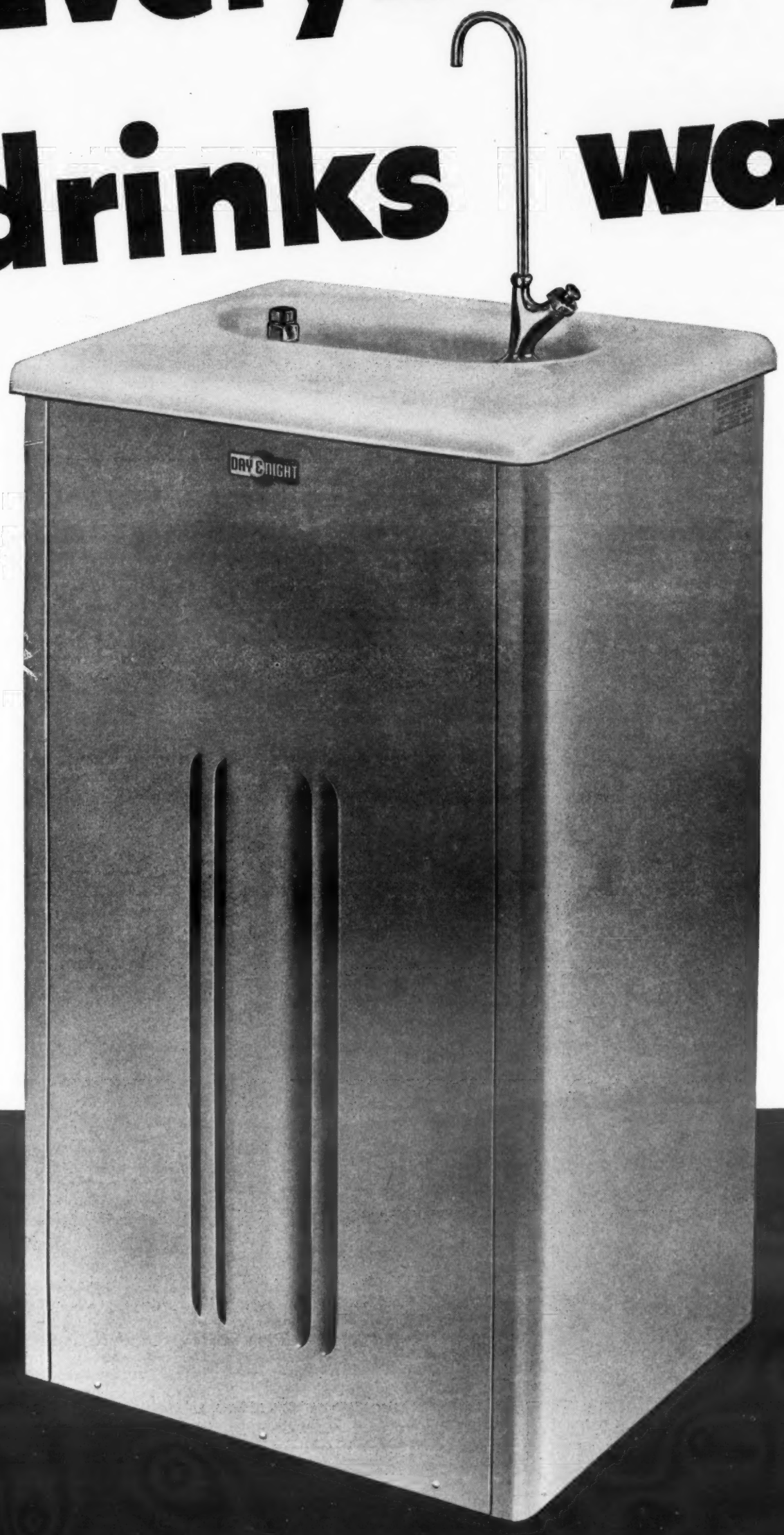
*All these plus*

All these features and many other refinements are combined into every Puffer-Hubbard cabinet to make it today's best buy. Solid door or glass door models with Thermopane Triple Glass. Also available, Icemaker units.

**PUFFER-HUBBARD MFG. CO.**
*The Mark of a Good Case
GRAND HAVEN, MICHIGAN, EST. 1898

## HERE'S YOUR MARKET

# Everybody drinks water




REGARDLESS of their other beverage tastes, the American public is agreed on one point; they all like to drink water—COLD water. Working, playing, eating, shopping, or traveling, Mr. and Mrs. America and their children demand plenty of cool drinking water. Those facts add up to just one answer—a big market for water cooling.

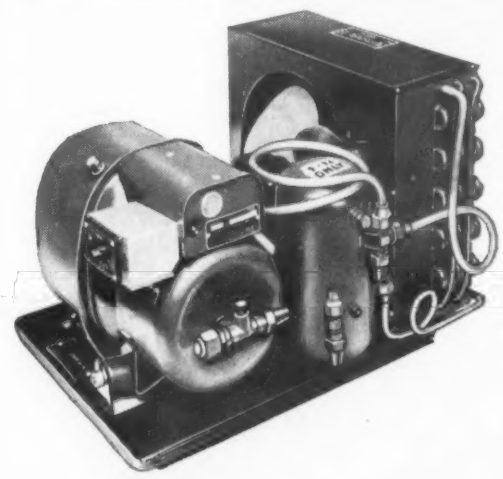
Industry is buying water coolers for its workers. Hotels and restaurants are modernizing their methods of water cooling for table service and room guests; department stores, service shops, roadside stands, theaters, office buildings, schools and even churches are finding it necessary to offer a cool drink as a regular service.

Every dealer can step up his volume and profits by taking a share of this water-cooler market. Of course, it takes some engineering skill to properly select equipment, recommend locations, and guide the customer in the use of the product, but reasonable attention to these details will pay big dividends in sales and profits.

Servel Supermetic is the ideal answer to the condensing unit problem in the water-cooler field. High capacity, high efficiency, simplicity, and freedom from service ills make a Supermetic easier to sell and keep sold. A wide variety of sizes covers the field—from five gallons per hour to sixty gallons per hour—from the simplest, self-contained cooler to a large circulating system.

Water-cooled models in all of the larger sizes insure high capacity under mid-summer conditions. Next time you have a heavy-duty water-cooling job, specify "Servel Supermetic."

Self-Contained Water Cooler courtesy of Day and Night Manufacturing Company, Monrovia, California, specialists in heavy-duty water cooling for over fifteen years. (Model DU2-1 Cooler with pitcher filler.) The Electric Refrigeration Division of Servel, Inc., manufactures condensing units only. These are available through prominent distributors and fixture manufacturers in all sections of the country.



**Servel Supermetic is offered in five fractional HP models and eight integral HP models adaptable to the water-cooling field.**

**Servel Inc.**

**ELECTRIC REFRIGERATION DIVISION, EVANSVILLE 20, INDIANA**

This is Number Nine in a series of advertisements featuring the markets available to the alert dealer in the commercial refrigeration industry. Ask for reprints for use in training your salesmen to take full advantage of all commercial refrigeration markets.

# INSIDE DOPE

by GEORGE F. TAUBENECK

*(Concluded from Page 1, Column 1)*

## *Poetry Corner*

From Joe Krall of Tyler Fixture Corp. comes a contribution of verse to this column.

Normally, the poets leave us cold. So, this being summer, we give you the following doggerel in the hope that it will cool you off, too.

I'm settin' down here on my milk pail at home.
And leavin' the cow while I type you this pome.
Old Bessy is switchin' her tail cuz she's mad—
But Bessy don't know that I just read your ad!
That cow doesn't dream I ain't one of her ilk—
That's she's got a poet down here squirtin' milk.

I learned me to type and I learned me to spell
So's I could get rich with the pomes I would sell.
My typin' machine I keep hid in the hay,
If Granny should find it, Lord knows what she'd say.
My kinfolk don't guess at the rhymes I have wrote
While swilling the pig and while feeding the goat.
My kinfolk are Granny (who's human like me)
And Rosy the goat who is sweet as can be,
Six ducks and a pig with a cute little face—
And all of us live on our ten-acre place.

We're proud of this ten-acre place which we own,
Though covered with cockle-burrs, bindweed and stone.
My Granny thinks farmin' and hard work are swell
And shirkers and poets will all go to hell.

But nevertheless I am riskin' the curse—
Your products inspired me to write you a verse.
You'll find it inclosed cuz I hoped and I thought
If mabbe you really did like it a LOT,
You'd swap it for part of the cash I ain't got,
For one of your freezers I've yearned for a lot.
If I could write rhymes for a TYLER—why, gee,
I'd figure that Heaven was smilin' on me.
"Imagine," gasps Granny, "a-keepin' stuff froze
When out in the garden is bloomin' a rose.
Imagine the wonder, the joy, and the thrill
Of eatin' one's vittals all covered with chill!"

Gosh! Back to my milkin'! The cow now IS mad,
She's spotted me staring wide-eyed at your ad.
But quick as I'm finished I'll dash out real spry
And set by the mail-box to wait your reply!

My Granny's a gal with a kind, wrinkled face,
A grandkid—that's me——and a ten-acre place.
Our land is all covered with bindweeds and stone
And growin' crops wears us both down to the bone.
Said Granny, "My brains is as young as you please;—
I can't say as much fer my back and my knees.
I've jest reached the place where I ain't gonna toil
To raise lots of vittals to can —and to spoil!"

Then Granny dug out her old sock, aged and brown,
Dumped out all her nickies and headed for town.
She took all her savings and bought HARDERFreez;
Since then we've been livin' like ladies of ease.

Our beans, peas and spinach, our strawberries, too,
Come out of that locker as fresh as they grew.
Says Granny, "I never knowed quite such a thrill
As eatin' my vittals all covered with chill.
Before I got HARDERFreez—oh, how I'd sigh,
And figger I maybe was fixin' to die.
But HARDERFreez vittals has spruced me up so
I figger I'll live to a hundred or so.
That HARDERFreez lets me avoid so much work
I've got whole days extry to set and jest shirk.

"My neighbors have mostly got lockers now, too,
But you know what most of 'em hanker to do?
They hanker—since seein' our HARDERFreez freeze—
To swap off their lockers and git one of these!"

Earnestly yours,
AHLENE FITCH

## *Definition of 'Free Enterprise'*

The definitions of free enterprise are as numerous as they are confusing. Probably the most cogent, understandable, and forceful one yet to be propounded has been devised by John Hancock, a partner of Lehman Bros. and a member of the U. S. delegation to the United Nations Atomic Energy Commission.

"Let me try to describe this free enterprise system as it appears to me. It is a philosophy, a faith, a thing of the spirit and soul of America. It is not the product of a brain-truster, or of men who have made failures of their lives. It represents the striving of our people and the evolutionary development of the last thousand years.

"It is an entirely practical idea, for it has worked in America. It produced a standard of living and a national prosperity not even approached elsewhere in the world. While it can be improved, one need not apologize for its minor weaknesses.

"The American Way of Life has prospered in the idea that 'man is both too weak to wield unlimited power, and, thank God, too strong to submit to it.' No one has found 'ringing words' for expressing the ideas wrapped up in the American Way of Life, but to me it certainly means all these ideas—equal opportunity for all, personal liberty consistent with full personal responsibility, no leaning on a beneficent or a bankrupt government (the only difference being one of time), no coercion by any one, no favors or benefits by government to one class of its people because of political pressures or with the purpose of gaining votes, no interference with the economic life of the nation, except when clearly in keeping with the national interest—the interests of all the people—no taking from one group for giving to another, or, in even simpler terms, the Golden Rule from the Sermon on the Mount.

"It is a system based on the idea of a 'fair field and no favors', a 'profit and loss' system in which the citizen backs his own judgment with his efforts. If the two combine to produce a result pleasing to the public, the citizen gets his rightful reward. On the other hand, if he doesn't do what the public wants, he pays for his own mistakes.

"This American Way does not expect to have the mistakes of management buried in a Federal Budget of 35 billion dollars. It is a system of rigid discipline which develops a sense of responsibility, for it provides an adequate incentive for a wise effort and adequate penalty for an unwise undertaking. It is all these and more too, but they seem the essential elements.

"It is surprisingly strange to me that any man believing in democratic principles would have so little faith in the people and their composite wisdom as to believe that a few are competent to manage the entire national economy, and that if competent men could be found, they should be entrusted with that responsibility. I fear that if government attempts to underwrite the wishes of all our people, government will succeed only in destroying itself."

## *Hot Weather Item*

One of the first hotels in the country to make electric sleeping comfort available to its guests, the Hotel Lowry of St. Paul, Minn., is offering its patrons a choice of conventional blankets or General Electric automatic blankets in their rooms when they register.

Since the operating cost of the automatic blanket is negligible, there is no charge for the service.

"We pride ourselves on providing the most modern equipment for the convenience of our guests," Manager Herbert E. Stats said, "and we realize that a good many of our guests today are used to automatic electric sleeping comfort at home and will appreciate it when visiting the Lowry."

Guests' reaction to the new service has been extremely favorable, Mr. Stats reports. "Even those who do not wish to use an automatic blanket are impressed by our alertness to every comfort need."

The Lowry plans to purchase more automatic blankets as the demand for them increases next winter.


Advertising Pays Big Dividends in sales of the SELB S-4

PHIL KRAFT noted bakery owner, puts his stamp of approval on the SELB S4 DISPLAY CASE THAT TAKES ONLY 4 ft.
...and installs it in his De-Luxe Cake and Pastry Shop to protect and display Cream-filled pies and pastries.
Increase Your Profits! SELL CHILLED WINE FROM THE...
SELB S4 A REFRIGERATED DISPLAY CASE THAT SELLS FOR TWO ...and takes only 4 feet
Protect your Biologicals in the SELB S4 A REFRIGERATED DISPLAY CASE that takes only 4 feet!
SELB takes only 4 feet
MEASURE YOUR PROFIT IN FEET!
SELB S4 takes only 4 feet!
A REFRIGERATED SELLING DISPLAY CASE THAT UTILIZES YOUR VALUABLE FLOOR SPACE!
YOUR DAIRY PRODUCTS IN the SELB S4 DAIRY
Write or Phone to See the SELB S4 today!
SELB MANUFACTURING CO. ARCADE BLDG. - ST. LOUIS 1, MO.
AMERICAN DRUGGIST
WINE AND VINES
BAKERY REVIEW
STORE AGE
CHAIN
THE MILK DEALER

Nationally Advertised in Leading Trade Magazines!

Our advertising campaign for you . . . the Selb dealer . . . is nation-wide. A reflection of our confidence in the Selb S-4, it's another way we back up you who sell the popular 4 foot cooler!

SELB takes only 4 feet

LOOK FOR THE SELB ADS . . . TELL YOUR CUSTOMERS ABOUT THEM!

SELB MANUFACTURING CO. ARCADE BLDG., ST. LOUIS 1, MO.

REFRIGERATED DOUBLE DUTY MEAT & DELICATESSEN CASES

- PORCELAIN EXTERIOR
- FLUORESCENT LIGHTED
- DESIGNED FOR BEAUTY AND EFFICIENCY

IMMEDIATE DELIVERY
6, 8, 10 & 12 Foot Lengths

WILSON FREEZERS, INC.
837 Tilden St., New York 67, N. Y.

# FASTER RESULTS!

## with the Chicago Tribune's Selective Area Advertising Plan

WHEN your sales message highlights the name of your dealer in the prospect's own neighborhood, more customers are attracted to his store. Multiply this many times throughout the Great Chicago Market and you'll see why the Tribune's Selective Area Advertising Plan promises faster results.

It's designed to give you and your dealers the kind of sales-winning campaign you both want. Under the Plan—

**EACH DEALER GETS:**

1 Selective coverage of his local market
2 Prominent display of his name and location
3 The low rate of just 2½c a line!

**YOU GET:**

1 Better identification of your local outlets
2 Enthusiastic dealer support
3 Advertising that pays off right away!

Join forces with your dealers and use the Tribune's Selective Area Advertising Plan to corral more of the Great Chicago Market . . . a market so large it can take all or the greater part of many manufacturers' production. Through the Plan you can best implement the significant facts revealed in the Tribune's Durable Goods Study among consumers and dealers.

To learn how this Plan fits your specific needs, contact your nearest Tribune representative as shown below.

Your advertising dollars do a far better job when you identify your dealers in their local markets under the Tribune's Selective Area Advertising Plan. No medium penetrates the Great Chicago Market like the Tribune. Tribune rates per line per 100,000 circulation are among the lowest in America.

# Chicago Tribune

*The World's Greatest Newspaper*

July average net paid total circulation:
Daily, over 1,030,000; Sunday, over 1,500,000

**A. W. DREIER, CHICAGO TRIBUNE**
810 Tribune Tower, Chicago 11

**E. P. STRUHSACKER, CHICAGO TRIBUNE**
220 E. 42nd St., New York City 17

**FITZPATRICK & CHAMBERLIN**
155 Montgomery St., San Francisco 4

**W. E. BATES, CHICAGO TRIBUNE**
Penobscot Building, Detroit 26

MEMBER: AMERICAN NEWSPAPER ADVERTISING NETWORK, INC., FIRST 3 MARKETS GROUP, AND METROPOLITAN SUNDAY NEWSPAPERS, INC.

Wall WIRE PRODUCTS COMPANY
PLYMOUTH • MICHIGAN
Makers of
REFRIGERATOR SHELVES • STAMPINGS
FORMED AND WELDED PRODUCTS

Some day in the not distan tfuture refrigerator manufacturers will adopt Stainless Steel Shelves for every model in their line.

- All Steel Construction
- 5 Inches Fiber Glass Insulation
- Fully Rounded Stainless Steel Top
- Rubber Flip Flop Lids
- Separators Between Compartments
- Hermetic Condensing Units

WILSON FREEZERS, INC.
837 TILDEN ST.
NEW YORK 67, N. Y.

IMMEDIATE DELIVERY
6, 8, 10, & 12 Holes

## Ilg Electric Co. Appoints Pfautsch Chief Engineer

CHICAGO—Raymond V. Pfautsch has been named to succeed A. G. Sutcliffe as chief engineer of the Ilg Electric Ventilating Co. here, M. J. Frank, president, has announced.

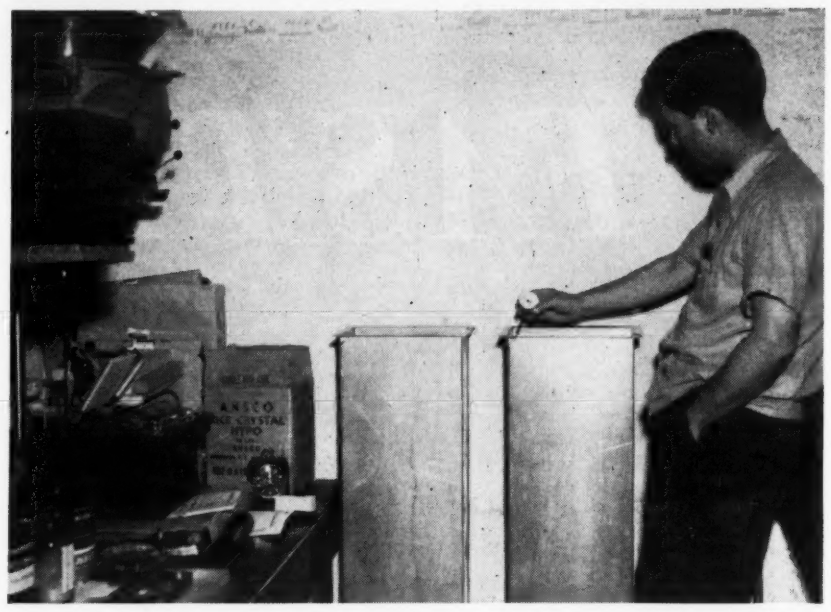
R. V. Pfautsch

Mr. Sutcliffe retired on July 1 after serving as chief engineer for 20 years and being associated with the company for 37 years, Mr. Frank said.

Mr. Pfautsch has worked in Ilg's engineering department since his graduation from the University of Illinois with a mechanical engineering degree in 1929, he stated.

Specializing in new product development, Mr. Pfautsch became assistant chief engineer in 1940, a position he held until his present appointment. He is a member of the American Society of Mechanical Engineers.

## *No Fumes, No Headaches, No Guesswork*



A worker in the Valley Photo Supply checks the temperature of the hypo and developer tanks after the installation of air conditioning in the dark room. The temperatures are identical, naturally. Chauncey Schmidt gives the air conditioner credit for this fact due to day 'round maintenance of even temperature in a room heretofore insufferable.

* * *

## Air Conditioner Keeps Photographer's Chemical Solutions at Even Temperature

McALLEN, Texas—Using an army surplus air conditioning unit to convince a local commercial photographer that refrigeration would protect his darkroom chemicals from the lower Rio Grande valley's subtropical heat paved the way for the sale of a new unit, Frank Van Ness, manager of the Hayes-Sammons appliance store in Mission, Texas, declared.

When Chauncey Schmidt, owner of the Valley Photo Supply here, came to Mr. Van Ness with his heat problems—keeping all the chemical solutions at even temperatures—Mr. Van Ness suggested he bring his darkroom temperature down to 68° F.

"Then your chemical solutions will drop down to room temperatures automatically," he explained.

Mr. Schmidt was skeptical. But he finally agreed to the installation of the 3-ton army surplus unit.

Mr. Schmidt and his darkroom manager were soon convinced of the benefits of air conditioning not only for the chemicals but for the darkroom workers too.

"The air conditioner," the darkroom manager related, "does away with all the fuss and muss ordinarily encountered. There is no more guesswork. Chemicals are left in their tanks and that saves extra work. And all chemicals remain the same temperature.

"What impresses me most is that there are no more chemical fumes to cause headaches. The air is always clean and fresh and this does away with eyestrain.

"I would never again work in a darkroom that was not air conditioned."

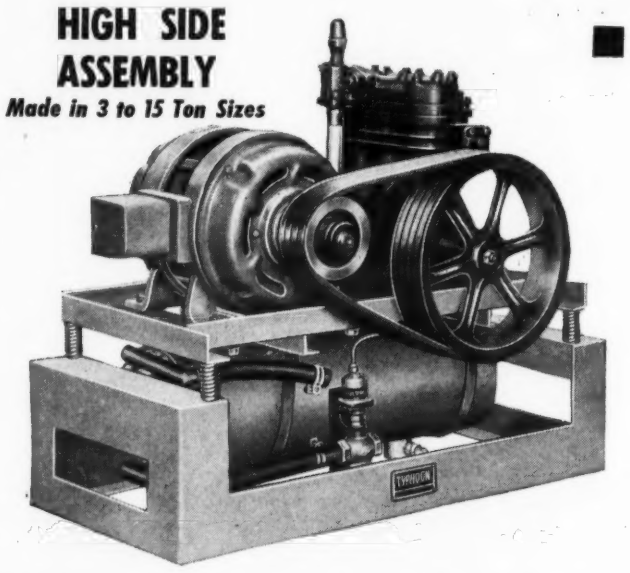
Mr. Schmidt soon had the bulky 3-ton job replaced by a smaller Carrier ¾-ton unit. Greater efficiencies resulted, according to Mr. Van Ness.

Completely sold on air conditioning, Mr. Schmidt declared, "Besides saving us extra labor and permitting us to turn out superior work, it keeps darkroom personnel happy."

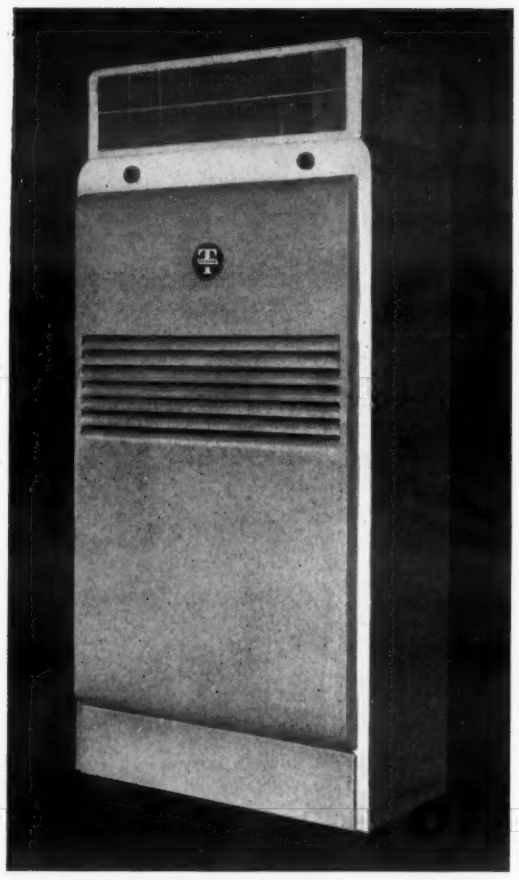
TYPHOON A COMPLETE LINE OF EQUIPMENT FOR AIR-CONDITIONING INSTALLATIONS

The TYPHOON line of air conditioning units and equipment are designed for maximum flexibility in planning a wide variety of installations. Economy of operation, long life, dependability under most trying conditions are the inherent qualities of TYPHOON products.

HIGH SIDE ASSEMBLY
*Made in 3 to 15 Ton Sizes*



TYPHOON's suspension spring base absorbs all vibration, eliminates need for cork pads, rubber blocks. Complete with compressor, flywheel, V-belt, drive, line valves, all copper condenser, receiver, ball-bearing motor, dual pressure control, water regulator, valve and belt guard.



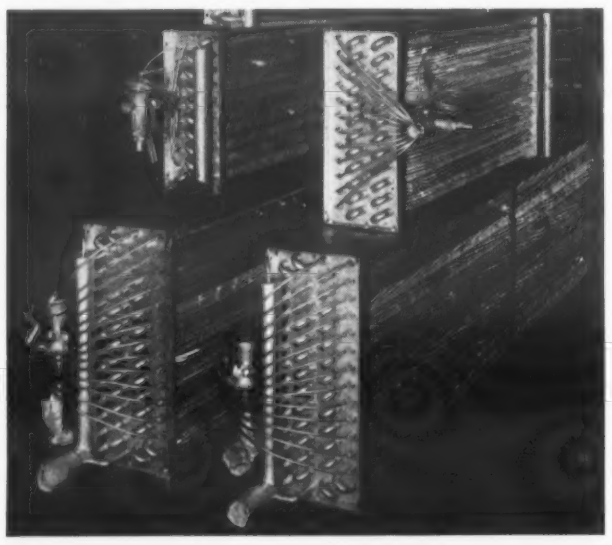
TYPHOON PROP-R-TEMP SELF-CONTAINED UNIT

HEATS IN THE WINTER - COOLS IN THE SUMMER

Truly an all-purpose air conditioning unit. The addition of one or two row heating coil transforms this rugged, oversized unit from a cooling system to a heating system.

The TYPHOON UNIT is built to give trouble-free performance year in and year out, delivering 12,000 BTU's of actual air conditioning for every ton of rating.

*Available in 3-ton, 5-ton and 7-ton sizes.*



TYPHOON COILS

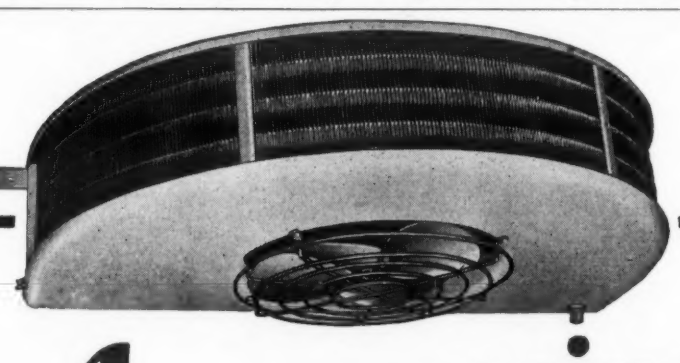
HEATING COILS
WATER COILS
DIRECT EXPANSION COILS
NON-FREEZE TYPE COILS
STANDARD TYPE COILS

*Fabricated to specifications in any size or shape for Immediate Delivery.*

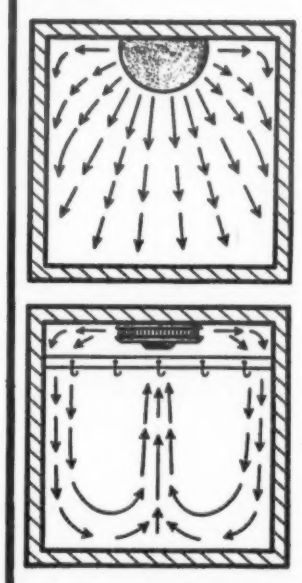
NATIONALLY ADVERTISED

*Write for complete information and dealer territories still open.*

TYPHOON AIR CONDITIONING CO., INC.
Division of Ice Air Conditioning Co., Inc.
794 Union Street Brooklyn 15, N. Y.



Announcing THE NEW Filterpure HALF ROUND COOLING UNIT with Air Purification FOR WALK-INS



TAKES NO STORAGE SPACE FROM A COOLER

*Sold by Leading Refrigeration Wholesalers*

BETZ CORPORATION
HAMMOND • INDIANA

## Texas Polio Foundation Will Include Year-Round Conditioning Equipment

GONZALES, Texas—The Gonzales Warm Springs Foundation, dedicated by generous Texans to the war on infantile paralysis, has announced that three major buildings of the treatment center will be equipped with year-round air conditioning to promote the health and comfort of its child patients.

Contracts have been awarded the Bell-Kotzebu Co. of San Antonio, to air condition two 40-bed treatment units, presented respectively by Fort Worth and Houston citizens, and Cullen Center, combination school, chapel, and theater specially designed for little wheel chair patients. The air conditioning equipment was constructed by Carrier Corporation of Syracuse, N. Y.

Situated 10 miles north of this city near the Gonzales-Palmetto State Park, the treatment center has access to a 200,000 gallons-per-day flow of 106-degree spring water and has a climate which averages 62 per cent of sunny days. The average temperature is 68.09.

The Carrier air conditioning units will accomplish two purposes: (1) purify air in the buildings, and (2) raise or lower indoor temperatures to comfortable levels on those days when outside temperatures fail to meet medical requirements for the patients.

Founded in 1937, the original unit of the foundation has treated 200 children from 80 Texas counties in its ten years of service. The new Carrier air conditioned Fort Worth and Houston treatment units with a total 80-bed capacity will make facilities available for 146 patients, more than doubling present rosters of patients.

The three new buildings will raise the total to six. Already in operation are two hospital buildings and a residence for doctors and nurses.

The new installation will cost in the vicinity of $400,000, all pledged by Texans.

## *J. A. Hagan Will Manage New Sturtevant Div. Office*

RICHMOND, Va.—Opening of an office of the Sturtevant Division of the Westinghouse Electric Corp. at 218 Travelers building, 1108 East Main St., has been announced by A. G. Mutimer, the division's middle Atlantic district manager.

Joseph A. Hagan, Jr., a graduate of Virginia Military Institute who was a Marine captain in World War II, is manager of the new office.

## *Refrigeration Supplies Sales Rose Sharply After First Quarter*

NEWARK, N. J.—Ample supplies of room coolers and other types of refrigeration equipment and supplies during 1948 were forecast by M. Seligman, president, Tenney Engineering Co. here, in an interview published in the *New York Times*.

Refrigeration supply sales rose sharply in the past three months because buyers stopped waiting for lower prices and began active buying, he declared.

Firm orders for future delivery are being placed by equipment manufacturers who are now assembling units for distribution next year, while scarcities of materials has eased off enough to make many types of scarce components more available.

Following a temporary lull in buying during the first quarter, the "scare is off" and second-quarter buying is up 50% as manufacturers and parts wholesalers resume normal stocks and inventories of coils, thermostatic expansion valves, and other products, according to Mr. Seligman.

A more normal flow of production is possible under these conditions, but Mr. Seligman also notes a greater number of inquiries for experimental and developmental engineering work.

## Former Self-Service Frozen Food Case Builds Drugstore Volume

### Bulk Ice Cream Display Ups Fountain Sales 10%

AUGUSTA, Ga.—A volume of $125 per week in pre-packaged bulk ice cream sales has been accomplished by the Lane Drugstore on Walton Way, here, through setting up a former frozen-foods self-serve refrigerator directly in front of the store's soda fountain.

Manager Ollie McNair of the Lane Drugstore installed the refrigerator when it became obvious that three employes behind the 17-stool soda fountain would not be able to cope with the demand for take-home ice cream which appeared during 1947. Therefore, he arranged to buy the case, and set it up where every soft-drink customer at the fountain rail was bound to see it.

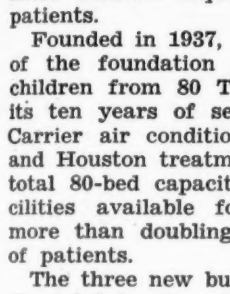
Results have been astonishing, according to Mr. McNair. Not only has the case sold $125 per average week in pints and quarts of ice cream, but fountain volume has been increased by 10%. The reason for this is simple, he points out — customers who come in on a hot Sunday afternoon to pick up a 25-cent pint of ice cream or a 50-cent quart, usually cool off with a soda fountain drink.

Placed just in front of the soda fountain at the Lane Drugstore, this frozen food display case produced a weekly average of $125 in bulk ice cream sales. At the same time volume at the fountain went up 10%. The case was installed because the three employes behind the fountain could not handle both the fountain and bulk sales. The box is restocked twice daily during the hot weather. Its location allows every fountain customer to be tempted to take home a package, according to Mr. McNair, manager of the store.

The four-hole fixture is restocked twice a day at an average, and thus, instead of "competing" with the soda fountain has actually been a tremendous sales builder, according to Mr. McNair.


TOPS IN WATER COOLERS

OASIS ELECTRIC WATER COOLERS



You get the best in thirst-quenching convenience with OASIS. Built by EBCO, they're backed by 20 years of water cooler leadership.

THE EBCO MFG. CO.
401 W. Town St.
Columbus 16, Ohio



for SULFUR DIOXIDE and METHYL CHLORIDE

See Your ANSUL WHOLESALER

These Ansul Refrigerants have a long record for DRYNESS, PURITY and DEPENDABILITY. You will like Ansul's friendly service.

*REG. U.S. PAT. OFF.

ANSUL CHEMICAL COMPANY
REFRIGERATION DIVISION
MARINETTE, WISCONSIN

Distributors for Kinetic's "Freon-11," "Freon-12," "Freon-21," "Freon-22" and "Freon-113"



THE ELPECO LINE

THERMOTRON —flow control

UNITRON —unit cooler

CUBEOTRON —ice cube maker

CAPACITRON —capacity booster

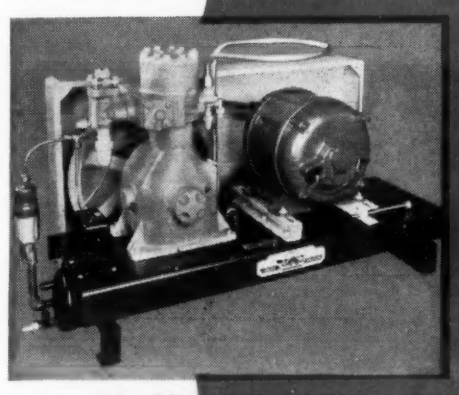
EXOTRON —condenser

CONDENSOTRON —condensing unit

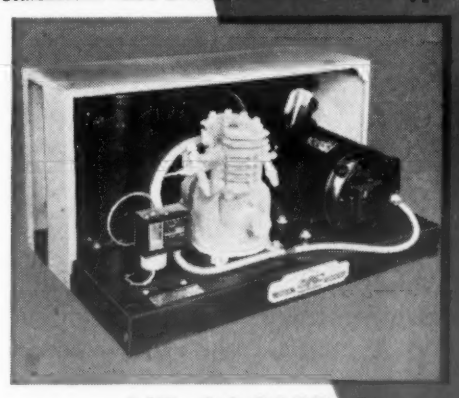
THERMEK —heat transfer surface

CHOOSE YOUR CONDENSING UNITS
FROM THE MOST COMPLETE LINE IN THE INDUSTRY

45 different types and ratings of ELPECO Commercial Type Condensotrons to choose from ⅛-2 H.P.



WATER COOLED
Model WV200 Condensotron for remote installation. Also available in air cooled type.



AIR COOLED
Model BT50 Condensotron for remote installation. Also available in water cooled type.

PACKAGE
Model QK16 Condensotron for fixture compartment installation. Air cooled type only.

NEW FEATURES
NEW LOW PRICES

With the new 1948 line of ELPECO Condensotrons, you can now get commercial condensing units for every type of service from a single source. What's more, the line has new features for ease of servicing and at new low prices that are more than competitive in today's market.

The floating motor base is a real contribution to quiet operation. The Permaline belt adjustment keeps the original factory alignment of motor and compressor at all times. The jumbo receiver can hold a full charge on most system pump downs.

THE EXCLUSIVE NEW FLOATING MOTOR BASE

A big step forward in quiet operation and freedom from vibration. Available from ¾ to 2 H.P. air and water cooled.

For full information and prices see your ELPECO wholesaler

ELPECO GREEN DRAGON

ELECTRIC POWER EQUIPMENT CORP., 412 North 18th St., Philadelphia 30, Pa.

# FOR SALE

## Manufacturer's Excess Inventory

★ **ALUMINUM TUBING**
1/8"—5/16"—3/8" and 1/2"
O.D. x .035 Wall x Coils 30' to 50' Mill Price.
5/16"—3/8" and 1/2"
O.D. x .040 Wall x Coils 30' to 50' Mill Price.

★ **BUNDY STEEL TUBING**
287,000' 5/16" O.D. x .028 Wall x Coils
40' x 50' Best Offer.

★ **SEAMLESS STEEL TUBING**
12,000# 1/2" O.D. x .035 Wall x Coils
Best Offer.

**REFRIGERATION COMPRESSORS—2400—1/5 H.P.**

Universal Hermetic Pumps Model #15L2 in original factory cartons .....$32.00 Ea.

*Write, Wire or Phone:*

**G. L. VAN SCIVER**
3100 SOUTH KEDZIE AVENUE
CHICAGO 23, ILLINOIS
ROCKWELL 2400


## Store Offers Study Of Appliance Use to High School Seniors

### *'Short Cuts To Better Living' Class Meets Once Weekly*

SOUTH BEND, Ind.— Robertson's department store has just concluded a program known as "Short Cuts to Better Living" whereby high school home economics class seniors were familiarized with the many advantages offered by modern home appliances.

The first program of its kind to be held, the students and their teachers all from schools in and around the area, were guests of the store once each week during the school term from 10 a.m. until 2:30 in the afternoon.

One-third of this time was spent in the appliance department of which Milo Cook, originator of "Short Cuts to Better Living," is manager. Here, the future homemakers viewed demonstrations given by Mrs. Rita Beatty, home service director, on the operation of the Bendix automatic washer and the complete electric kitchen. After the demonstrations, Mrs. Beatty discussed with the group various aspects of laundry and kitchen planning.

The remainder of the time was devoted to fabrics, drapery, furniture, and interior decoration departments, with the head of each department taking the young ladies in charge. A luncheon was served at the end of each visit.

## *She's Sold on a Packaged Kitchen*

Mrs. Morgan L. Smith, customer at Campbell Coal Co.'s electrical appliance department, is seen inspecting her recently-purchased Hotpoint kitchen. The range is a "Hostess" model; the cabinet sink is 54 in. long; and the refrigerator has a capacity of 7 cu. ft. At left also is an automatic washer. An assembly of Hotpoint steel wall and base cabinets completes the layout.

* * *

## Display of Operating Kitchen Enables Dealer To Sell 31 'Packages' In 6 Months

ATLANTA — Handling packaged electric kitchens has really paid off for the electrical appliance department of the Campbell Coal Co. here.

Not only has the firm sold 31 complete package kitchens in six months time, but the very fact that they were on display has drawn increasing numbers of single appliance purchasers to the store, according to H. A. Tatum, major appliance buyer.

The department has a complete operating kitchen on display, which has proved to be a powerful appliance sales building asset, Mr. Tatum said.

The company went into the package kitchen business in 1945 when it learned that Hotpoint Inc. had reserved 1,000 complete kitchens for veterans, he declared.

Describing his selling system, Mr. Tatum asserted, "We simply reserve the complete model kitchen for the ex-G.I. who needs it most.

"All veterans who are going to local contractors for new homes are familiar with the fact that we can supply a Hotpoint all-electric kitchen on a moment's notice.

"Thus we have often signed up a customer before his site for the home has even been selected.

"Since we cover all aspects of the building supply field, and are anxious to supply not only the materials to build a home but the contents, package kitchens have worked out ideally."

Each package kitchen, he explained, contains built-in wall and base cabinets in porcelain-covered metal, electric range, double drainboard sink, refrigerator, dishwasher, and garbage disposal unit if requested. Most of the kitchens have an automatic home laundry included.

Four full time appliance salesmen make calls on building contractors and follow up on prospects who phone the department asking for prices and specifications on model kitchens, Mr. Tatum said.

The company salesman calls on the prospect, determines the specifications of the kitchen and gives the customer a delivery priority.

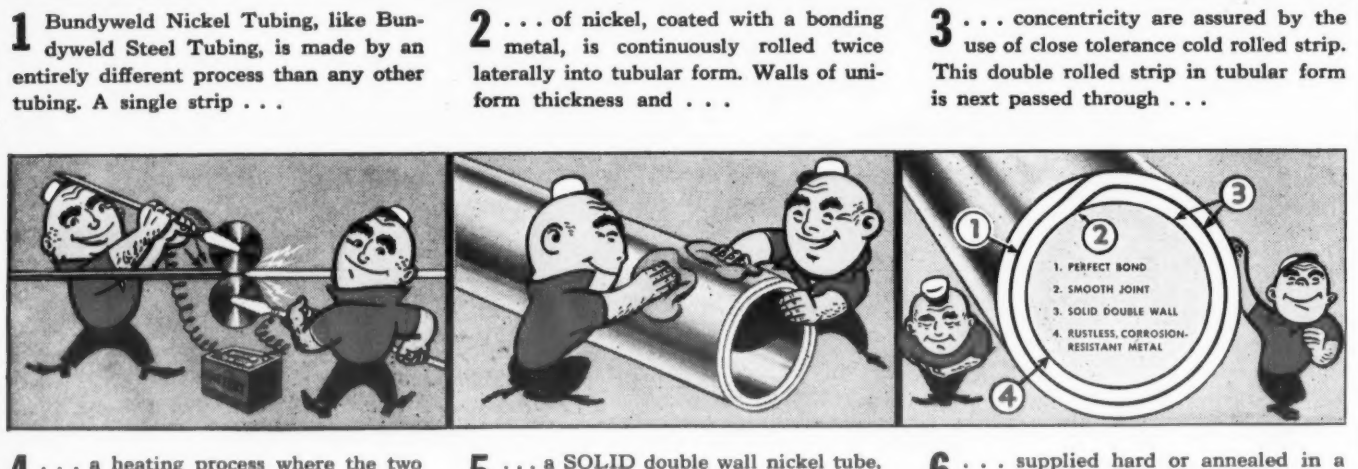
So far, said Mr. Tatum, all kitchens have been installed on the date promised.


# Why Bundyweld Nickel makes better beverage Tubing

**1** Bundyweld Nickel Tubing, like Bundyweld Steel Tubing, is made by an entirely different process than any other tubing. A single strip . . .

**2** . . . of nickel, coated with a bonding metal, is continuously rolled twice laterally into tubular form. Walls of uniform thickness and . . .

**3** . . . concentricity are assured by the use of close tolerance cold rolled strip. This double rolled strip in tubular form is next passed through . . .




**4** . . . a heating process where the two walls are metallurgically bonded at a high temperature, carefully controlled. After cooling, the tube is . . .

**5** . . . a SOLID double wall nickel tube, perfectly bonded throughout 360° of wall contact, free from scale and closely held to specified dimensions. It can be . . .

**6** . . . supplied hard or annealed in a wide range of standard sizes up to ⅝" O.D. Special sizes cold drawn. Also available in steel and Monel.

BUNDYWELD Nickel makes better beverage tubing because it combines the well-known advantages of nickel with the outstanding superiority of Bundyweld.

**Look at what Bundyweld process does for this tubing:**

- Faster cooling, through thinner walls
- Stronger, because it's double-walled
- Easier to form; it's strong but ductile

**And look at these advantages nickel adds:**

- Longer life because of the well-known corrosion-resistant properties of nickel
- Strong, because nickel itself is strong
- Purity-protecting, as attested by world-wide use of nickel in beverage and food processing equipment
- Easy to clean, with any ordinary cleaning compound or fluid

Write today for complete details. *Bundy Tubing Company, Detroit 14, Michigan.*

**BUNDY TUBING**
★ ★ ENGINEERED TO YOUR EXPECTATIONS ★ ★

**BUNDY TUBING DISTRIBUTORS AND REPRESENTATIVES — BUNDYWELD NICKEL AND MONEL TUBING:**

**ALLOY METAL SALES LTD.**
TORONTO 5, 861 BAY ST.
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SEATTLE 4, 3628 E. MARGINAL WAY
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**METAL GOODS CORP.**
DALLAS 9, 6211 CEDAR SPRINGS ROAD
HOUSTON 1, 16 DRENNAN
NEW ORLEANS 13, 432-438 JULIA ST.
TULSA 3, 302 NO. BOSTON ST.
**PACIFIC METALS CO., LTD.**
LOS ANGELES 21, 1400 S. ALAMEDA ST.
SAN FRANCISCO 10, 3100 19TH ST.
**STEEL SALES CORP.**
CHICAGO 23, 3348 S. PULASKI ROAD
DETROIT 10, 5151 WESSON AVE.
INDIANAPOLIS 2, 1816 NO. MERIDIAN ST.
MILWAUKEE 4, 647 W. VIRGINIA ST.
MINNEAPOLIS 15, 529 S. 7TH ST.
ST. LOUIS 10, 4565 MCREE AVE.
**J. M. TULL METAL & SUPPLY CO.**
ATLANTA 3, 285 MARIETTA ST.
**WILLIAMS AND CO., INC.**
CINCINNATI 14, 1921-1927 DUNLAP ST.
CLEVELAND 14, 3700-3716 PERKINS AVE.
COLUMBUS 15, 31 NORTH GRANT AVE.
PITTSBURGH 12, 901-937 PENNSYLVANIA AVE., N.S.
TOLEDO 2, 650 E. WOODRUFF AVE.
**WHITEHEAD METAL PROD. CO., INC.**
BALTIMORE 17, 413 W. NORTH AVE.
BOSTON 39, 281 ALBANY ST., CAMBRIDGE, MASS.
BUFFALO 2, 254 COURT ST.
NEWARK 5, 205 FRELINGHUYSEN AVE.
NEW YORK 14, 303 WEST 10TH ST.
PHILADELPHIA 40, 1955-75 HUNTING PARK AVE.
SYRACUSE 2, 242 W. WASHINGTON ST.

BUT . . .

Though it was the pride of the early pioneers, in their push westward, it would be entirely inadequate for present day high-speed, heavy load, transportation needs. Today's huge modern, transcontinental trailer-trucks, testify to the triumph of American progress.

CHEMICALS ACP PROCESSES

**RUST PROOFING AND PAINT BONDING**
*Granodine* *
*Duridine* *
*Alodine* *
*Lithoform* *
*Thermoil-Granodine* *

**RUST REMOVING AND PREVENTING**
*Deoxidine* *
*Peroline* *

**PICKLING ACID INHIBITORS**
*Rodine* *

# *Duridine* *

is just as remarkable an improvement, in the metal-cleaning field. It cleans—removes oil and grease—and other surface soil—phosphatizes and changes the metallic surface into a non-conductive phosphate film, of uniform crystalline structure—provides a durable bond for organic finishes.

DURIDINE provides extraordinary protection for painted metal surfaces. It is applied by means of mild steel power-spray washers—and is a thorough, speedy and simple process.

* Trade Mark Reg. U. S. Pat. Off.

**AMERICAN CHEMICAL PAINT CO.**
AMBLER ACP PENNA.

# 'Largest One-Story Hardware Store' Air Conditioned with Two 40-Hp. Units

## *Booster Blowers In Tower Help with Store-Front Load*

ST. LOUIS—Air conditioning the "largest hardware store in the world on one floor," spreading over 40,000 sq. ft. of space, posed a neat problem to Natkin & Co., Westinghouse air conditioning contractors, here.

Complicating factor was the heavy heat load caused by St. Louis' high humidity, 105° F. summer heat beating down on a flat roof and in through a solid glass, sidewalk to ceiling, 125 ft.-wide store front.

Here is how Natkin & Co. handled the job for the Central Hardware Co's new mammoth store.

They installed, after six months of delays caused by shortages of necessary parts and materials, two 40-hp. Westinghouse compressors in the basement. They put a large tower on the northeast corner of the building to house "booster blowers" and other air conditioning equipment.

The tower, they explained, was needed to handle the heavy heat load built up right behind the glass front of the store.

The compressors, using "Freon," furnish refrigerant to two banks of refrigerating coils housed in a metal enclosure containing a blower with 34,000 c.f.m. capacity.

As the system is also used for winter heating, the compressors are connected in addition to a high pressure steam coil and boiler with more than 10,000 sq. ft. of steam radiation. This boiler is likewise located in the metal enclosure.

The two compressors are thermostatically controlled so that under normal circumstances and mild summer weather, one compressor is sufficient to keep the Central Hardware store at a comfortable 80° F. with 50% humidity.

When outside temperatures rise above 95° F. with 90% humidity, the second compressor cuts in to maintain the prescribed inside conditions.

Precisely the same arrangement is incorporated in the boiler and steam coil heating equipment. Extra heat radiation space is made available when sharp cold makes it necessary, according to Natkin & Co.

Asbestos insulated risers carry hot gas from the compressors to the evaporative condensers located on the roof of the building. These condensers have worked so efficiently that during a recent solid week of temperatures of 100° F. and higher, only one compressor was needed to operate the system, the contractors said.

From the tower located above the front of the store, a 4,500-c.f.m. blower boosts the amount of chilled air delivered directly behind the display windows to remove the pool of heat usually found there in stores of this type. A small heating coil located in the tower, working in conjunction with the blower, acts as a window defroster in the winter.

Cool air is distributed over the giant store through two insulated traveler ducts down the center of the 150 ft. ceiling, and through two smaller ducts running across the front and rear of the building. The rear duct cools six small business offices and the lavatories.

Louvred grilles are used except at the front of the store where four anemostats are employed. The anemostats are located one in each corner and one on each side of the clear plastic swinging doors.

In the basement, additional ducts lead to a switchboard room and a "Tailored Lumber Shop."

# Activated Carbon Prevents Cold Storage Fur Odors

NEW YORK CITY—Another novel and practical use for activated carbon air purification has been found in the refrigerated fur storage vaults of Bergdorf-Goodman, smart New York women's specialty store.

Before the installation of activated carbon the furs would, upon unpacking, frequently fairly reek of a strange and foreign "cold storage" odor. Despite every conceivable safeguard the peculiar odor persisted. Finally it was determined that the stored furs themselves were responsible.

Each animal skin has its own characteristic scent and when thousands of garments are virtually sealed up in a relatively small space the generation of smells is considerable. Lingering perfume, cosmetic, and body odors added to the accumulation were absorbed by the furs.

Purification of the vault air by activated carbon supplied by W. B. Connor Engineering Corp., provided the solution. The Bergdorf vaults, with 44,530 cubic feet of space, have a capacity of 6,770 garments. With a refrigeration cycle of eight minutes, 180 carbon-filled canisters in the ducts were found to be adequate to maintain complete air purity within the storage space. At the rate the carbon is absorbing odors, reactivation, that is, release of the absorbed gases and restoration of the carbon to its original potency, is necessary only every three years.

# *Perfecold Plans Expansion And Conditions Offices*

LOS ANGELES—In line with its present expansion program in the commercial refrigeration field, Perfecold of Los Angeles is enlarging and remodelling its headquarters building at 1940 South Main Street in Los Angeles.

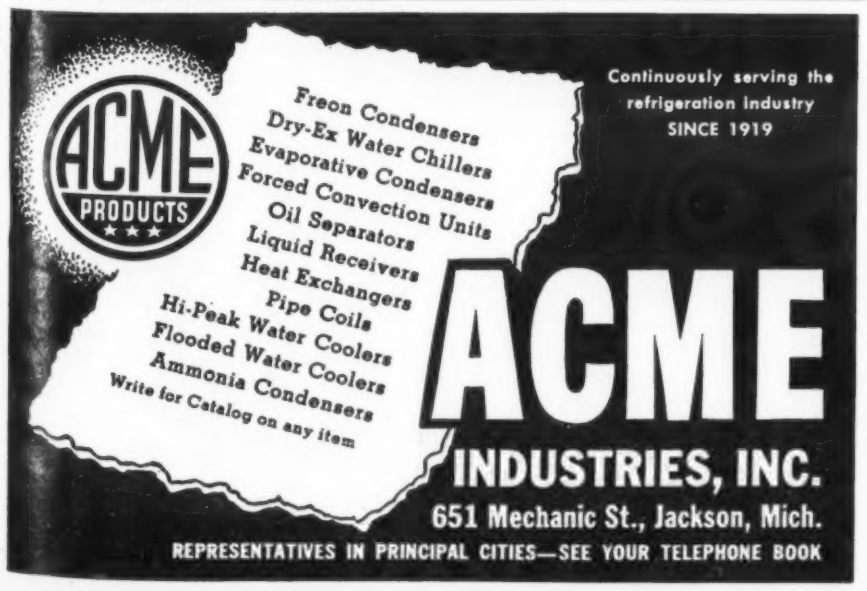
Under Perfecold's new plans, more than 10,000 square feet of office and warehouse space will be available to company personnel. Offices are being refurbished and air conditioned, while the warehouse area is being expanded to allow for a modern refrigeration assembly line.

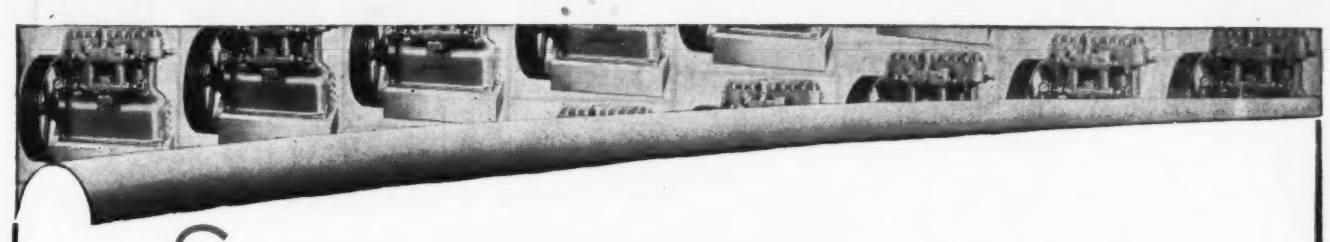
New offices are under construction for the service and parts section, the modification division and the sales department. A large show room for refrigeration equipment will also be built during the latter part of the summer. Remodeling will be completed by the first of next year.

## *Refrigerated Candy Department Stimulates Summer Business*

BINGHAMPTON, N. Y. — The North Side Pharmacy, 500 Chenango St., stimulated its summer candy business considerably through installation of a refrigerated candy department—the first in the city.

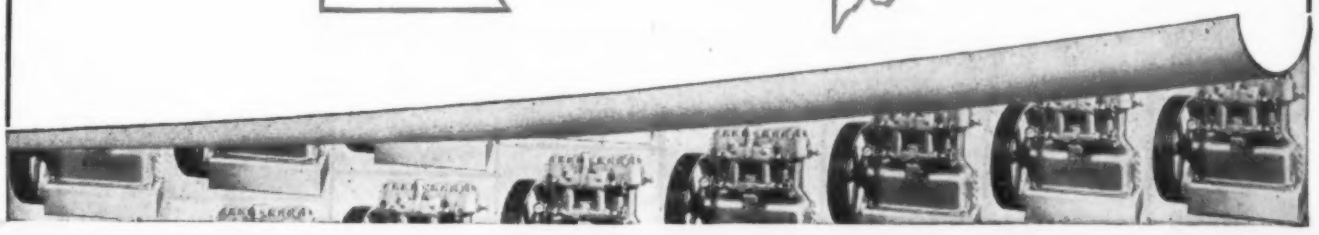
The refrigerated case protects the candy from heat, cold, and moisture and was particularly helpful during July and August when southern New York heat affects candy flavor.

Since 1905, in industries dependent on refrigeration compressors, "BAKER" has always meant the finest in refrigeration equipment. For instance, in bakeries, a refrigeration compressor is as important in bread making as an oven. Flour needs controlled, cool storage. Other ingredients, such as yeast, milk, some shortenings and eggs all must be refrigerated. Mixing water must be cooled. Mixers must be refrigerated. Proofing and fermentation require accurate temperature and humidity control. "Retarding" takes cold, insures oven fresh products, prevents waste. Bread must be quickly cooled after baking. Other processes require humidity control. Refrigeration seals bread wrappers. Frozen bread stays fresh up to ninety days. Modern bakery shops are air conditioned. "BAKER" refrigeration compressors help bake bread throughout the world.

Baker Ice Machine Co., Inc., with factories at Omaha, Neb., and South Windham, Me.



# Bubbles *without* Troubles!

The fine service reputation of Thiel PREST-O-MATIC Carbonators and the many Model C's in use for more than a year makes PREST-O-MATIC a must in your equipment line.

For more than ten years, the trade has come to recognize that the name PREST-O-MATIC is synonymous with trouble-free carbonating equipment.

Distributors tell us the New Model C is a door-opener on every call. It is not only a sure-sale specialty. It helps sell other lines of equipment bought by bars and fountains dispensing mixed drinks and soda water.

**MODEL "C" PREST-O-MATIC is the only motorless carbonator you do not have to install in a refrigerated area.**

26" x 6" x ½" . . . shipping weight 26 pounds . . . 20 gallons of carbonated water an hour . . . operates on water pressures from 15 up.

Precision-engineered against trouble. Simple to install. No water pre-cooling coils. FIRST, LAST and ALWAYS . . . Model "C" is easy on the pocketbook.

*important territories open . . . phone RAndolph 0417*

**The New Model C PRESTOMATIC**

**Thiel Manufacturing Company**
**315 Beaubien St., Dept. A, Detroit 26**
Branch Office: 3900 E. Cooper, Tucson, Arizona


# SALES JOB APPLICATION STRESSES INTERVIEW

## *After Screening, Talk Can Reveal Character Traits*

*Editor's Note:* The following article and charts on selecting salesmen are taken from a piece by M. R. Norton in a bulletin for dealers published by the Wisconsin Power and Light Co., Madison, Wis.

**By M. R. Norton**

The first three steps in selecting salesmen have been covered in previous installments on this subject. We suggested first, a quick check to screen out the "bums," second, some kind of application to get a record of job previously held (but no references), together with enough personal statistics for your office records, and third, a check in person or by telephone with previous employers.

The fourth step is a well-planned interview to size up the applicant's personality and find out what makes him tick.

This "patterned" interview has been called organized, common sense. It tries to get complete information about the applicant after which ordinary judgment is used to weigh the facts and decide whether the applicant will be productive, stable and satisfied.

You won't have to waste much time giving complete interviews to

*(Continued on next page)*

**APPLICATION FOR EMPLOYMENT**

Name _____ Social Security No. _____
FIRST MIDDLE LAST

Address _____ Telephone _____

Age _____ Height _____ Weight _____ Color _____ Sex _____

Single _____ Married _____ Divorced _____ Separated _____ Widowed _____

Number of Dependent Children _____ Other Dependents, and Relationship _____

Date of Birth _____ Do you have a car? _____

Do You: Own Home? _____ Rent? _____ Board? _____ Live at Home? _____

Describe Any Physical Defects _____

What Are Your Hobbies or Special Interests? _____

To What Organizations or Clubs Do You Belong? _____

**EDUCATION:** Please Circle Last Year of School You Attended. _____
Grade School ____ 1 2 3 4 5 6 7 8 _____ High School ____ 1 2 3 4 _____ College ____ 1 2 3 4

Name of High School Attended _____

Name of College _____ Major Course _____

Other Education _____

**WORK HISTORY:** In the spaces below, give a full account of your Work Experience. Begin with the present or last position, and work back. (Include Military Service)

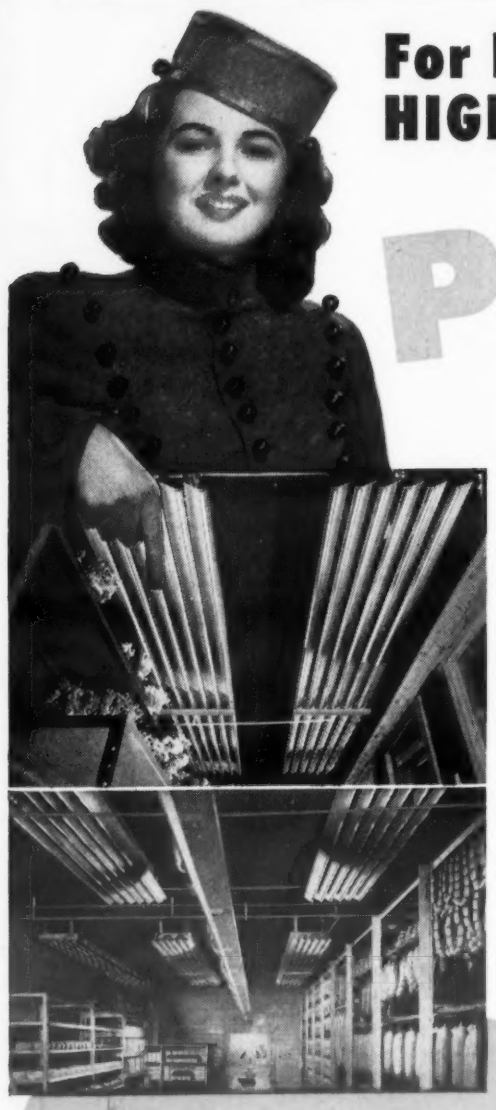
| From | To | Employer and Address | Your Job | Wages | Reason for Leaving |
|---|---|---|---|---|---|
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

Date _____ Signature _____

**SELECTING GOOD SALESMEN** — Rating Sheet

NAME _____ DATE _____

| | YES | ? | NO |
|---|---|---|---|
| **INDUSTRY AND PERSEVERANCE** | | | |
| 1. Has the applicant lived on his own instead of with relatives? | | | |
| 2. Has he received increases and promotions as would be expected? | | | |
| 3. Has he come reasonably close to attaining his goals and finished what he started? | | | |
| 4. Did he profitably spend his time after school and Saturdays when a boy? | | | |
| 5. Has he ever won special prizes, awards, contests, etc.? | | | |
| 6. Is he willing to work evenings or at odd hours? | | | |
| **STABILITY AND MATURITY OF JUDGMENT** | | | |
| 1. Has he had a reasonable number of jobs and remained a reasonable time? | | | |
| 2. Does he live in a desirable or good neighborhood? | | | |
| 3. Is his financial condition good and is he living within his income? | | | |
| 4. Are his habits good — drinking, gambling, etc.? | | | |
| 5. Are his hobbies and recreations mature? | | | |
| 6. Has he consistently made good decisions in regard to his business or personal affairs? | | | |
| 7. Has he concentrated on one line or kind of work? | | | |
| 8. Has he avoided garnisheements? | | | |
| **ABILITY TO GET ALONG WITH OTHERS** | | | |
| 1. Is he consistent in not "alibiing" his failures? | | | |
| 2. Is he level-headed instead of prejudiced on various subjects? | | | |
| 3. Has he kept out of trouble both on and off the job? | | | |
| 4. Has he had to work with people and enjoyed it? | | | |
| 5. Did he get along well with other employees? | | | |
| 6. Has he been happy and content on his jobs? | | | |
| 7. Are his reasons for leaving jobs reasonable and consistant? | | | |
| **AMBITION AND DESIRE TO WORK** | | | |
| 1. Is he interested in the job for some reason other than security? | | | |
| 2. Has he been dissatisfied with remaining on a small job for a long time? | | | |
| 3. Did he continue or complete his schooling in the face of obstacles? | | | |
| 4. Does he have a strong desire to get ahead? | | | |
| 5. Is he buying a home? | | | |
| 6. Has he a family dependent on him for support? | | | |
| 7. Is he interested in making more money? | | | |
| **LOYALTY** | | | |
| 1. Does he have a serious and sincere attitude toward his work? | | | |
| 2. Does he avoid criticizing his former employers? | | | |
| 3. Does he avoid putting clubs, outside work, etc., before his job? | | | |
| **LEADERSHIP** | | | |
| 1. Does he take part in outside activities, clubs, etc.? | | | |
| 2. Has he held offices in any clubs? | | | |
| 3. Has he had any particular success in handling people? | | | |
| 4. Does he appear to have the necessary self-confidence? | | | |
| **EXPRESSION** | | | |
| 1. Is he able to express himself clearly and well? | | | |
| 2. Is he free of extreme mannerisms or speech defects? | | | |
| 3. Is he natural in his speech? | | | |
| **APPEARANCE** | | | |
| 1 Does he show good taste in his dress and is he neat and clean? | | | |
| 2. Has he the poise necessary for the job and does he meet well? | | | |
| 3. Is he free of any handicaps or health limitations which would interfere with his work? | | | |

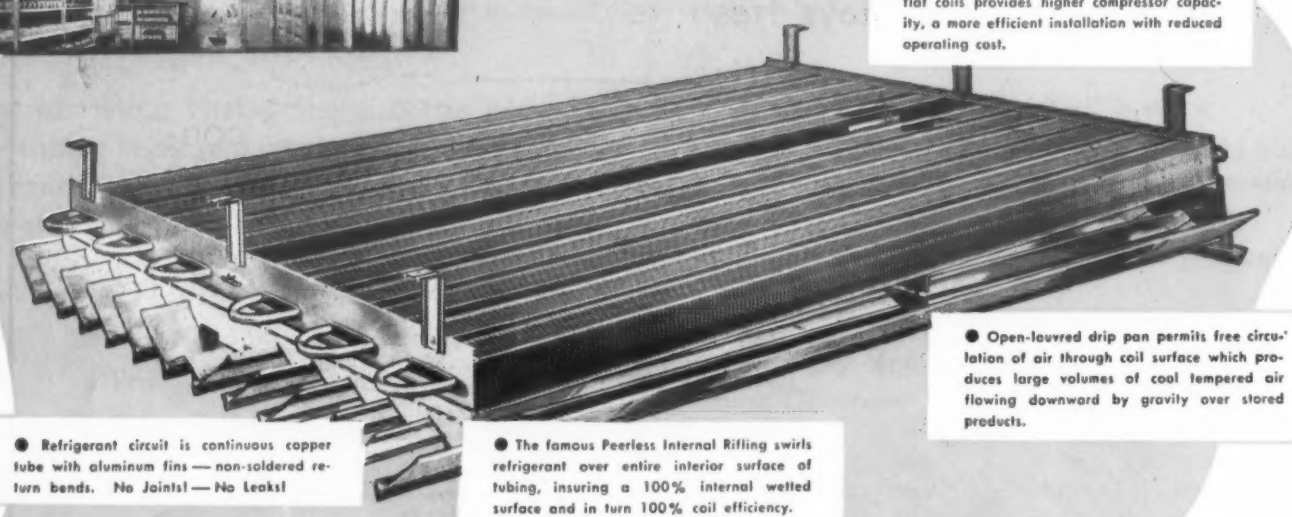
# For Positive Maintenance of HIGH HUMIDITY...

PEERLESS

# FLASH COOLERS!

● Where coolness without dehydration is essential, PEERLESS Flash Coolers give the desired performance. These are the original Flash Coolers, introduced 15 years ago by PEERLESS, and improved to their present high-efficiency in the refrigerating of cut meats, flowers, and all products where high humidity must be maintained. Wide, shallow coils spread under ceilings enable these units to deliver large volumes of cooled air with high relative humidity. Install them in cold storage boxes, walk-in and reach-in refrigerators, for retailers, wholesale houses, packing houses. Better preservation of products by PEERLESS Flash Coolers brings customer satisfaction.

For superior performance specify all these PEERLESS products: Flash Plates, Flash Coolers, Unit Coolers, Ice Cube Makers, Fin Coils, Off Center Coils, Expansion Valves and Capacity Boosters. Write for Details.



● Higher operating back pressure with low flat coils provides higher compressor capacity, a more efficient installation with reduced operating cost.

● Open-louvred drip pan permits free circulation of air through coil surface which produces large volumes of cool tempered air flowing downward by gravity over stored products.

● Refrigerant circuit is continuous copper tube with aluminum fins — non-soldered return bends. No Joints! — No Leaks!

● The famous Peerless Internal Rifling swirls refrigerant over entire interior surface of tubing, insuring a 100% internal wetted surface and in turn 100% coil efficiency.

● A Flash Cooler occupies a space not to exceed 16" from ceiling. A complete unit, it is quickly, easily installed by bolting the convenient hangers to ceiling.

**SOLD THROUGH LEADING REFRIGERATION SUPPLY WHOLESALERS**

PEERLESS of AMERICA, Inc.

*General Sales Offices* 2901 Lawrence Ave., Chicago 25, Illinois, U. S. A.

REDWOOD COOLING TOWERS
BUILT FOR PERMANENCE

## To the trade *only*

Our entire facilities are devoted exclusively to serving the refrigeration supplier-contractor.

**We do *not* sell at retail**

RMC Towers are design engineered to modern requirements by Edward Simons (internationally known authority on heat transfer), with each unit to exact specifications, performance guaranteed—available now.

Full data on atmospheric or induced types on request.

**REFRIGERATING MACHINERY CO.**
HEAT TRANSFER EQUIPMENT
525 Market St., San Francisco 5, Calif.

# Interview Rating Sheet Helps Determine Ability and Personality of Applicant

*(Continued from preceding page)*

applicants with sales experience. Top notch salesmen usually aren't looking for jobs, so most applicants with sales experience probably were mediocre producers, hoping that the grass is greener on your side of the street. This can usually be discovered from the application and the telephone check mentioned previously. But in cases where he was a factory worker, a teacher, or a clerk, a complete interview will be needed to get all the facts which will enable your common sense to find out whether he has a good chance to make the grade.

The traits which seem to be most important in selling are industry, perseverance, stability, maturity of judgment, ability to get along with others, ambition, a strong desire to work, loyalty, leadership, ability to express oneself clearly, and neat appearance.

To discover these traits by means of an interview, takes time—perhaps an hour or more—and it is time well spent. Training the salesman later will cost plenty so why not be as sure as possible of his chances for success before you hire him.

To help decide whether the applicant has the qualities wanted, an interview rating sheet has been printed in chart form. It suggests some of the ways to determine his ability, his personality, and his character.

Careful thought should be given to the technique of the interview. It should be held in privacy and the applicant should be put at ease right away so he will relax and talk. Don't hurry, let him talk. Notes should be taken (inconspicuously) on the key points and a conversational manner adopted. Let him volunteer as much information as possible and get the complete story by use of friendly questions.

Psychological or aptitude tests have a place in hiring salesmen, but they are apt to be overrated. They serve to confirm what is brought out by the interview or to suggest traits which should be investigated more completely by means of the interview. It is difficult for most appliance dealers to use psychological tests, so they are not being covered here except to say that a successful retail appliance salesman does not have to have a brilliant intellect, in fact there is some indication that it is a handicap. Similarly, grades in school are not a reliable barometer of sales ability.

To summarize, the steps in selecting salesmen are:

1. Preliminary appraisal or rough screening.
2. Getting an application or record of his previous work.
3. Checking in person or by telephone with previous employers.
4. A carefully planned interview to get all the facts, provided that the other three steps have been taken first.

By all means try for top-notch salesmen. They will make more money for you.

# *Stoker Promotion To Test 'Appliance' Sales Methods In Key Areas of U.S.*

MILWAUKEE—Can the merchandising methods used for home appliances be applied just as successfully to stokers?

A. O. Smith Corp. here, manufacturer of the Smithway stoker and other consumer and industrial products, has decided to find out. A "test" campaign to this end is now under way in three key markets and two groups of small town and rural markets.

Chicago was picked as the "test" metropolis, Milwaukee as the experimental big city, and Iowa and Des Moines as a good geographical "proving ground." Central Wisconsin (taking in Sheboygan, Green Bay, Fond du Lac, and Oshkosh) and northern Michigan (including Marinette, Wis., Menominee, Escanaba, Sault Ste. Marie, and Houghton) were chosen as typical small-town areas.

Since it hit the market in the fall of 1945, the stoker has been advertised in national magazines. Now the merchandising program will include a series of hard-hitting advertisements in prominent newspapers throughout the selected areas.

The company paid for full-page advertisements to open the campaign in each section. Smith further agrees to foot the entire bill for a 600-line advertisement to match each 600 lines bought by the distributor.

Dealers "earned" listings in the opening advertisements by placing minimum merchandise orders. Future listings are paid for on a flat-rate basis, with the distributor getting the payments as an amortization of his investment.

This advertising is being supplemented by a well-planned mat service for newspapers. Dealers and distributors are urged to provide coverage of their own to tie in with the factory's efforts.

Announcement of the newspaper advertising program was made at meetings of existing and prospective dealers. Other subjects covered at the gatherings included a product presentation, a market analysis, national advertising, and promotional material.

Minimum stocks of merchandise must be maintained by participating dealers and distributors. In addition, they must purchase one of four kits of promotional material made to fit various sizes of operations.

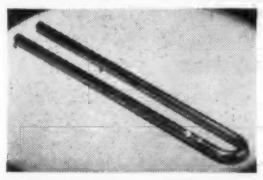
## *Marks Moves Up at Coleman*

WICHITA, Kan.—Louis Marks has been named manager of sales training for The Coleman Co., Inc., here. Until recently he was Coleman district representative for eastern Michigan.

In his new position, Mr. Marks will be in charge of a nationwide program designed to help Coleman distributors and franchise dealers in the effective merchandising of Coleman heating equipment.

Before joining the Coleman Co., Mr. Marks was district representative for Morley Brother's of Detroit.


**RETURN BENDS**

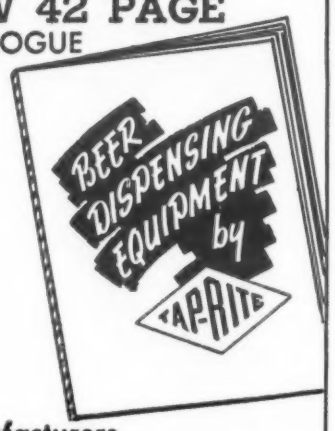


**IMMEDIATE DELIVERY**

On Hand
1100 Pieces 61 9/16" Long
1100 Pieces 85 9/16" Long
5/8—.035 Copper Tubing
Bent to 3/4" Centerline
Radius. 1 1/2" Center to
Center.

**BENT TUBE INC.**
*Complete Tubing Fabrications*
FOWLERVILLE, MICH.

**NEW 42 PAGE CATALOGUE**




*manufacturers*
TAPS
RODS • AIR PUMPS
FAUCETS • BLOCK TIN
and PIPE FITTINGS
*Ask About* TAPROID
The Proven Synthetic Tubing
Send for Catalogue
on Company Letterhead

**TAP-RITE PRODUCTS CORP.**
204 RAILROAD AVENUE
HACKENSACK, NEW JERSEY

# Frigidaire Equipment on the General Motors Train of Tomorrow...

From its powerful Diesel locomotive—made by Electro-Motive Division of General Motors—to its luxurious observation lounge, the Train of Tomorrow is a preview of ultra-modern travel. It features the Astra Dome, a glass-enclosed penthouse in the roof of each car, and many other innovations developed by General Motors' Styling Section.

The Train of Tomorrow is also a tribute to Frigidaire Engineering, for each car is completely air-conditioned by Frigidaire. Special dining car refrigerators hold fresh and frozen foods, chilled beverages are served in the observation lounge, and cool, refreshing drinking water is available.

Another important feature is the specially designed "Power Package", a self-contained, Diesel-powered, electric-generator unit. This was developed by Frigidaire in collaboration with Detroit Diesel Engine and Delco Products Divisions, General Motors. The "Power Package" provides each car with its own source of electricity.

Frigidaire—a pioneer in refrigeration and air-conditioning—with its experience in building more than 8 million refrigerating units, and more railway car mechanical air conditioning units than all others combined, was called on to design the air conditioning and refrigeration equipment for the Train of Tomorrow.

If the Train of Tomorrow comes to your city, by all means see it! See another example of Frigidaire's thinking to the future. See proof that—today, as for more than a quarter-century,

**YOU CAN DEPEND ON FRIGIDAIRE TO DO THINGS RIGHT!**

**You're twice as sure with two great names**

**Frigidaire** made only by **General Motors**

FRIGIDAIRE DIVISION • GENERAL MOTORS CORPORATION • DAYTON, OHIO • LEASIDE, ONTARIO

## They'll Do It Every Time . . . . By Jimmy Hatlo

OH-H-H-H-BOY! AM I TIRED! I WORKED 14 HOURS YESTERDAY, POURING CONCRETE FOR OUR NEW BASEMENT AND CUTTIN' LOGS FOR THE WINTER--OHH-UGH! OOH!
HIM AND HIS LITTLE COUNTRY PLACE! IT'D BE NICE IF HE'D DO SOMETHING CONCRETE AROUND HERE FOR A CHANGE
HE QUIT THE STOCK-ROOM. HE SAID THE PAPER CLIPS WERE TOO HEAVY-
OH! TOO BAD, VIRGIE! MAYBE YOU BETTER GO LAY DOWN ON THE BOSS'S COUCH FOR A WHILE
ONLY SIX MORE DAYS TO SLEEP BEFORE HE HAS TO GO TO WORK AGAIN-
THAT SHACK COST HIM FIVE GRAND—BUT WHAT IT'S GONNA COST THE BOSS BEFORE HE'S THROUGH IS PUL-LENTY!
JIMMY HATLO
LISTENING TO THE WEEK-END LABORER POUR OUT HIS TALE OF WOE— THANX TO CHRISTIAN JENSEN, SALT LAKE TRIBUNE, SALT LAKE CITY, UTAH.
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**It's Time To SELL Again!**

**3 Big Reasons Why**

**HUNDREDS OF SERVICE MEN PREFER TO SERVICE HUSSMANN REFRIGERATION EQUIPMENT**

*They Admire the Fine* **HUSSMANN** *Engineering*

Competent, experienced Refrigeration Service Men tell us that it's a real pleasure to work on dependable, HUSSMANN Equipment. It's simply the admiration one good workman always has for another's fine workmanship.

*They Appreciate the Liberal* **HUSSMANN** *Contract*

Service Men who work for HUSSMANN in the field are protected by a contract which assures them complete protection as to rates, compensation, etc.

*They Profit Through* **HUSSMANN'S** *Huge Volume*

Because HUSSMANN Equipment is in such great demand—and because so many HUSSMANN Installations are constantly being made—Service Men in every section of the country get regular, frequent calls that result in a dependable, consistent source of income.

**HUSSMANN**
REFRIGERATION, INC.
HUSSMANN BUILDING • ST. LOUIS 6, MO.



AN INTERNATIONAL INSTITUTION • SUBSCRIBERS ALL OVER THE WORLD

Trade Mark registered U. S. Patent Office; Est. 1926

AIR CONDITIONING AND REFRIGERATION News

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## It Takes Time, But We Do Learn

WHEN the ordinary man-in-the-street gets his nose rubbed in the floor-swill of practical economics he cannot help but note that a tainted essence surrounds and surmounts the hazy theorems which schoolteachers and politicians have sold him.

Concepts which he had been taught were either all-black or all-white turn out to be muddy grays. No wonder he is confused!

This forced recognition that beautiful theories often turn out unpleasantly has been happening to—and upsetting—the average American for some time. Particularly in the past few years has this eye-opening shift-of-values affected his psyche.

Normally, Mr. Average American works hard at his job, plays hard at his favorite sport, indulges himself in his hobby or favorite form of entertainment, and attends religiously his own church and club meetings. He's happy, and content, and doesn't bother to form opinions about "grave issues." He believes what the teacher told him, and lets it go at that. ("Teacher" was probably a socialist).

But, in the past few years, a few brutal facts about practical economics have come right up and punched us squarely in the nose. We have learned—painfully—what it is like to have prices controlled, for example. In recent memory we have seen empty, gleaming white trays in butchers' display cases — while OPA price-tags languished where there should have been pork chops and choice beef cuts. We have seen our wives get up early in the morning to be first-in-line to obtain that rare pound of butter, or box of soap chips—at ceiling prices. And we have gone without cigarettes, or new cars, while envying the politicians who seemed to have everything they wanted. So we had a grandstand view of how a managed economy worked—or didn't work. Did we like what we saw? All together: "Hell, no!"

Those theories about "collective action" advanced by professors who influenced us during schooldays sounded wonderful when we listened to them in classrooms. But they didn't work out in practice. It is only natural, then, that American citizens who possess an inquiring mind have become vitally concerned in recent months about such fundamental questions as:

What happened to our vaunted "free choice" system, and our "economy of abundance" when the professors who believe in government planning occupied the Seats of the Mighty during F.D.R.'s regime? Who was wrong, and why? How did we let ourselves get into such a mess? What can we do about it now?

Mr. Average American absorbs some economics lessons quickly, while at the same time he listens to a lot of guff which sounds well at the time, but which puts no meat on his table. He hasn't stopped learning yet, however. He still wants to know the answers to what is happening today and will happen tomorrow.

Do you "dig" the challenge?

If you, a business man who *does* know something about the economic facts-of-life fail to pass on what you know by means of the best tool at your disposal (institutional advertising)—the economic quacks and the Communist's hired underlings will have the field of public persuasion all to themselves again.

Not long ago five thousand Americans—a cross-section of the national population—were asked this question: "If the government owned and managed industries, would you get more or less for your money than you do now?"

Some 43% of those polled thought they would get as much or more under government ownership; 19% were uncertain. Of the college students interviewed, 63% were convinced they would do better under government ownership. Dr. Henry C. Link, who conducted these surveys, declares: *"Socialism and Communism have excelled Americanism only in promises, propaganda, missionary zeal, and education."*

What are *you*, Mr. Clear Thinker, contributing to the education of America's voters?

## Germans Developed 2-cu. ft. Adsorption-Type Household Refrigerator

WASHINGTON, D. C.—An adsorption-type refrigerator for household use was developed in Germany just before the war, according to a report by the Office of Technical Services, Department of Commerce.

The report describes the results of visits to 20 small German plants manufacturing electrical appliances such as motors, motor control gear, refrigerators, immersion heaters, and vacuum cleaners.

About 400 of the refrigerators were built and were said to be giving satisfactory service. The unit was produced by Homann Werke at Wuppertal-Vohwinkel.

Solid calcium chloride is used as the adsorbent, ammonia as the refrigerant, and stove gas as the heater fuel, the report says. Operation is automatic, thereby eliminating the need for a time switch to control heating and adsorption periods, it is pointed out.

Investigators learned the standard model had a capacity of 60 liters—somewhat more than 2 cu. ft.—and sold for 350 marks (about $82).

"The principal parts of the refrigerating system consist of a liquid receiver embedded in the insulation in the top of the refrigerator cabinet, an evaporator suspended from the ceiling of the cabinet's interior, and a generator-adsorber and a finned condenser mounted in the rear panel of the cabinet," the report reveals.

"The generator-adsorber is made of steel pressings welded together to form vertical cylindrical channels. The channels hold small copper cups containing calcium chloride.

"Liquid ammonia from the liquid receiver changes into gas in the evaporator by adsorbing heat from the food stored in the cabinet. The gaseous ammonia flows by way of the receiver to the generator-adsorber where the calcium chloride adsorbs it, condensing it into a liquid. A metallic bellows operated by a thermostat drives off the heat liberated during condensation.

"When the generator-adsorber becomes sufficiently saturated with liquid ammonia, a bi-metal valve increases the amount of stove gas fed to a pilot light. The heat vaporizes the liquid ammonia and forces the vapor into the finned condenser where it cools and once again turns into a liquid. The liquid ammonia then returns to the liquid receiver."

According to the report, the following test results were typical of the refrigerator's operation:

| | |
|---|---|
| Room temperature | 25° C. |
| Cabinet air | 3 to 6° C. |
| Evaporator | 8 to 9° C. |
| Equivalent food load | 4.78 watts |
| Heating time | 1 hour 45 minutes |
| Gas consumption | 472.5 liters (about 20,000 B.t.u.) |

Also included in the report are brief descriptions of a magnetic-type refrigerator compressor said to be 10% more efficient than the conventional type; sheathed-wire immersion heaters of simple but effective design; and 15-ampere air-break contactors of the horizontal slide type. The contactors supposedly almost eliminate bounce and last for as many as 1,000,000 operations under full load.

Reproductions of the document (PB-63686—*German Electrical Industry*) are available in photostat or microfilm form. Cost of the former is $5; of the latter, $2.

Orders for the report should be addressed to the Office of Technical Services, Department of Commerce, Washington 25, D. C., and should be accompanied by check or money order, payable to the Treasurer of the United States. Requests should list the PB number.

## 50-Ton York Unit To Keep Grocery Shoppers Cool As Cucumbers

GREAT NECK, N. Y.—The first completely air conditioned supermarket of the Bohack chain in northern New York has been opened here with selling space totaling more than 6,080 sq. ft.

In addition to fluorescent lighting, an acoustical ceiling, and large separated departments, the store has a 50-ton York air conditioning system, which keeps temperature at a cool 80° throughout the summer months.

Women weary from hot shopping trips are invited to rest in a comfortable lounge provided at the front of the market, just before entering the turnstile.

The air conditioning system is equipped with a "standby compressor" to maintain service in event of the failure of the main compressor.

## Meinke Follows McCormick As President of Appliance Association In Madison

MADISON, Wis.—Al Meinke, head of the Al Meinke Refrigerator Co., was recently elected president of the Madison Appliance Association, which group includes most of the appliance dealers of the city.

Mr. Meinke succeeds R. E. McCormick, manager of the appliance department at the Harry S. Manchester, Inc., department store.

Other officers elected were: M. E. Smithback, Smithback Appliance Co., vice president; Edward R. Felber, vice president and sales manager of the Madison Gas & Electric Co., secretary; and P. F. Kees of Kees Appliances, treasurer.

Organized in 1945, the association's main objectives include the promotion of harmony among cooperating merchants and ethical and effective sales plans and methods as well as to cooperate in the training and development of sales personnel.

## Gorby To Distribute McCray Coolers, Cases After Sept.

PITTSBURGH — In October, the Gorby Refrigeration Co. will become distributor for McCray Refrigeration Co. coolers and cases.

Gorby will occupy the two-floor shop facilities now operated by Clayton L. Hall at 940 Penn Ave. as a factory branch.

Hall will become district sales manager for McCray covering western New York, tri-state West Virginia and Ohio, and all of Pennsylvania.

## Fedders-Quigan 6-Month Net Profit of $730,545 Reported

BUFFALO, N. Y.—Fedders-Quigan Corp. here reports a six-month net profit of $730,545, equivalent to 61 cents a share. This compares with a net profit of $233,727, or 19 cents a share, last year.

A net profit of $402,581, or 33 cents a share, is reported for the June quarter. The figures for the second quarter a year ago were $209,637, equal to 17 cents a share.


**EXPERIENCED SALES ENGINEER**

**DO YOU NEED** a man in your organization with extensive experience in developing increased uses and applications of products in the refrigeration and air conditioning industry.

Excellent contacts with leading manufacturers and distribution outlets.

**IF YOU ARE** an aggressive organization and are looking for effective representation in the refrigeration field, contact

**BOX 2466, AIR CONDITIONING & REFRIGERATION NEWS.**



**PLAYSAFE**

**USE CHICAGO SEALS and VALVE PLATES**

Precision lapping, superior construction and simple installation make Chicago seals ideal for replacement.
Only Chicago valve plates have replaceable seats.
PERFECT BALANCE
Chicago Seals

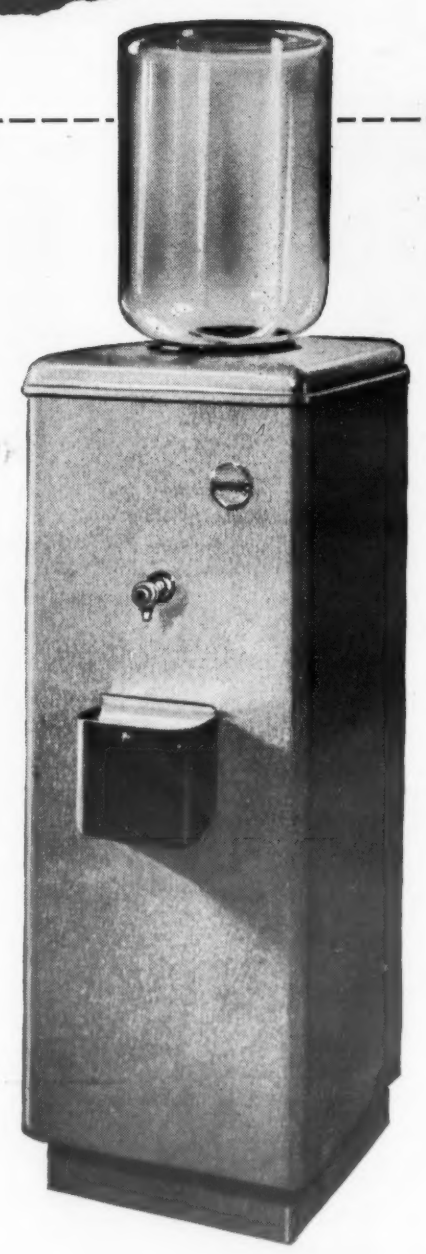
CHICAGO SEAL CO.
20 NORTH WACKER DRIVE • CHICAGO 6, ILL.



**You can get it now...**

**You can sell it now...**

**the new Sunroc Bottle Cooler!**



READY for immediate delivery is SUNROC Model US7B2—the electric bottle cooler that meets the wide demand for the best in postwar design and craftsmanship.

This attractive, steamlined unit has a capacity of three gallons per hour. The compressor is hermetically sealed. Stainless steel is used generously for protection against corrosion.

Accompanying these new features is the basic *quality* that has made SUNROC Water Coolers famous for trouble-free service, long life and low operating cost.

Model US7B2, list price only $225.00 F.O.B. Glen Riddle, Pa., is a worthy addition to the SUNROC line, which includes water coolers to fill every business, industrial and institutional need.

The coupon below is your first step toward a SUNROC Franchise. It will bring you full information about SUNROC'S products, prospects and plans. Sunroc Refrigeration Company, Glen Riddle, Pa.

**SUNROC**
*Water Coolers*
GLEN RIDDLE, PA.
"SUNROC SERVES THE WORLD . . . a Cool Drink of Water"

**Distributors throughout America and in 30 Foreign Countries**
**Branch Offices in Principal Cities**

**SUNROC REFRIGERATION COMPANY**
GLEN RIDDLE, PA.

Please send me, without obligation, details of the Sunroc line and Sunroc Franchise for ☐ Distributors ☐ Dealers. (Check which.)

Company _____

Address _____

City _____ Zone _____ State _____

Address to Mr. _____ (AC-8)

# What's New

## Perfecold Beverage Cooler Is Designed for Export

LOS ANGELES—A new self-contained dry beverage cooler, designed especially for export, has been introduced by Perfecold International here.

The unit, built in 5 ft. and 8 ft. sizes, features a self-contained ⅓-hp. Mills lightweight condensing unit that need only be plugged in to operate, the manufacturer declared.

It also features an all-aluminum case designed to resist corrosion in high humidity, he added. The entire unit is designed to give maximum efficiency under all conditions, he asserted.

The 8-ft. cooler has a 32-case capacity, while the 5-ft. unit holds 18 cases, he said.

The Mills condensing unit, which is factory installed to facilitate immediate use in any area, can be removed from the cooler for cleaning and maintenance by unscrewing a few bolts and sliding it out on attached rails, Perfecold explained.

Air vents on three sides of the condensing unit allow cross draft cooling and a pressure lubrication system entirely eliminates oiling, the company stated.

The cooler is also equipped with two utility shelves and disappearing doors.

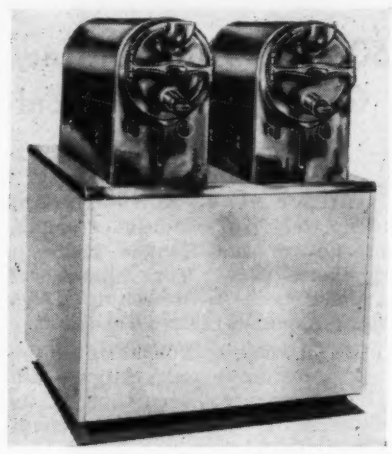
## 'Twin' Taylor Units Serve 2 Frozen Flavors at Once

BELOIT, Wis.—A new line of "Twin" Taylor freezers, designed so that frozen malted or frozen custard can be served direct from the freezer, has been introduced by Tekni-Craft here.

The new freezers are available in three sizes—two 6-qt., two 10-qt., or two 20-qt. freezers, the manufacturer said.

Advantages offered by these models are faster service through two dispensers and the ability to provide two different flavors from the same unit, he added.

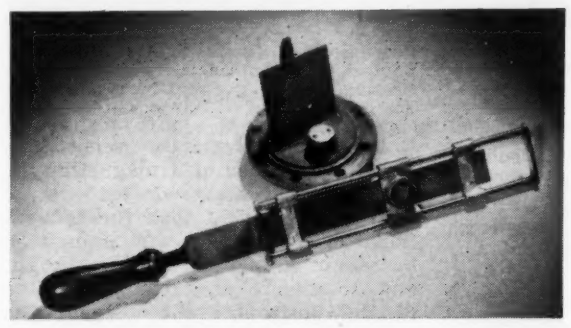
The new models are equipped with Tekni-Craft's automatic temperature control, called the Atom-Age control, which enables both freezers to operate from the same size compressor that is normally used to operate a single freezer, he declared.



"Twin" Taylor Freezer

The control further turns off the compressor when the frozen malted or ice cream reaches the correct temperature for serving and starts it again if the temperature rises too high, the company asserted.

## New Float Reseating Tool Turned Out by Wagner



LONG ISLAND CITY, N. Y.—A new float reseating tool, consisting of a mill file which is clasped in a frame and slides back and forth in a bed, has been introduced by the Wagner Tool and Supply Corp. here.

The tool, known as the Watsco float reseating tool, has been designed to reseat the low side float needle seat on any Frigidaire system requiring a float, the manufacturer said.

Cast as an integral part of the tool's bed is a sleeve which is drilled and finished so that it fits snugly over the Frigidaire float needle seat, he explained.

This holds the file precisely parallel to the face of the seat and permits resurfacing by a few passes of the file over the seat, he added.

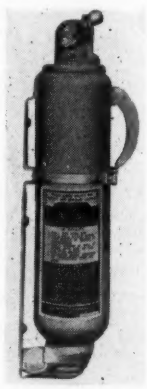
Use of the tool eliminates the need for returning the float to the shop for resurfacing and even the need of a vise, he claimed.

Except for the file, the tool is made entirely of brass.

The complete unit is sold at $7.50, the manufacturer states.

## Inexperienced Can Use Ansul 4 Fire Extinguisher

MARINETTE, Wis.—Designed for effective use by inexperienced operators, a new 4-lb. dry chemical fire extinguisher, known as the Ansul 4, has been introduced by the fire extinguisher division of the Ansul Chemical Co. here.



The manufacturer claims that the new extinguisher has received very high ratings for effectiveness from national approval agencies.

The new model uses the Ansul Plus Fifty dry chemical extinguishing agent which is said to be suitable for extinguishing fires in flammable liquids, gases, solids, and electrical equipment and for controlling fires in ordinary combustibles.

The extinguishing agent is claimed to be non-toxic, non-corrosive, non-abrasive, and a non-conductor of electricity.

The lightweight extinguisher measures 19⅛ in. long and 3½ in. in diameter. Maintenance is said to be greatly simplified and the unit can be recharged on the spot after use.

It is supplied with a quick opening bracket for vertical or horizontal mounting in locations where space is limited, the manufacturer pointed out.

The extinguisher can be used in industrial plants, on trucks, autos, or buses, in homes, stores, and institutions, for fire hazards that do not demand larger equipment, he asserted.

* * *

## Ironer Has Gear, Motor Assembly Inside Roll

NEW YORK CITY—The motor and gear assembly is inside the 21-in. roll on the new ironer-table combination now being introduced by Empire Appliance Co., 480 Lexington Ave., here.

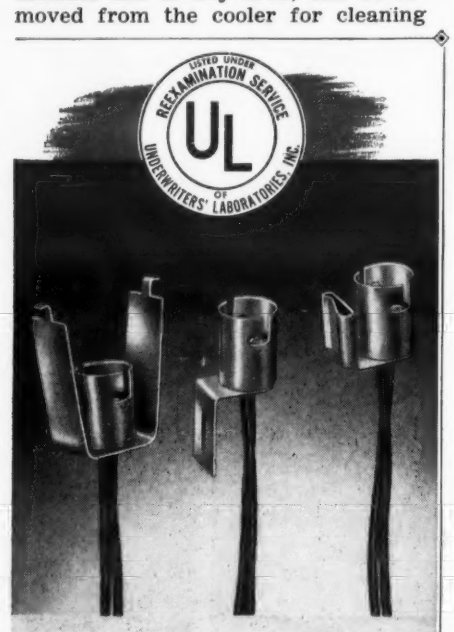
Announced features of the unit include a 1,200-watt heating element and an automatic thermostat on the motor, a triple-plated shoe, and a "no-tip" tubular steel table.

Said to be Underwriter's approved, the appliance will retail for $69.95 complete. It carries a one-year guarantee.

## To Test Air Filters




A draft gauge such as this is currently being supplied to most Dust-Stop Air Filter purchasers by Owens-Corning Fiberglas Corp. The device is handy in determining when air filters should be replaced.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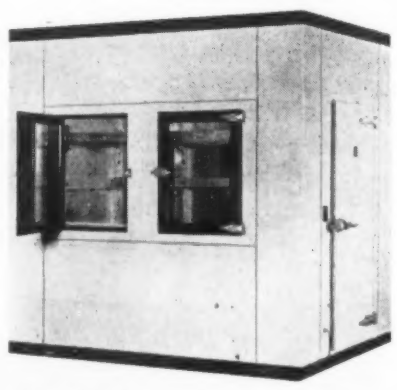

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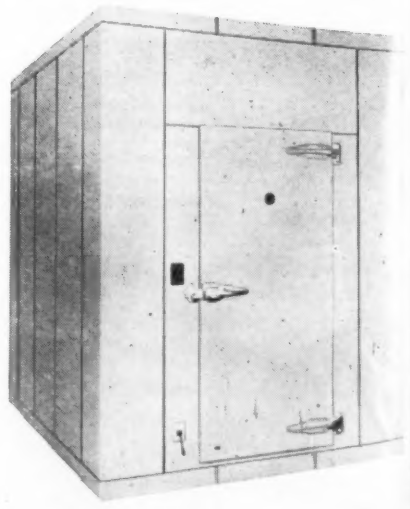

*Write for illustrated folder*

**The CLEVELAND REFRIGERATOR Co.**
*Manufacturers of Quality Products Over a Quarter Century*
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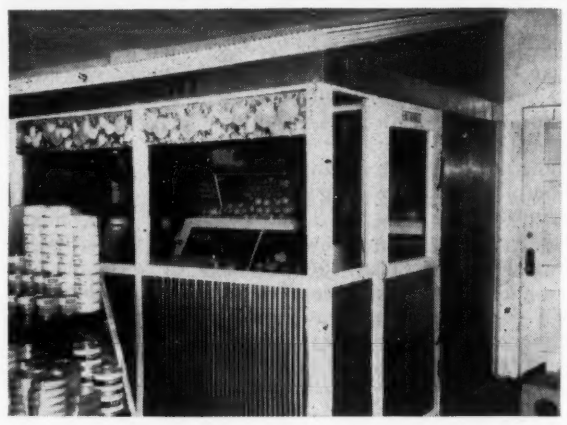
## Produce Shrinkage Loss Here Runs Under 1%



**Designed to reduce shrinkage and spoilage loss on produce (which it did), this big glass and metal walk-in also increased sales 30% for the St. Ann Supermarket in St. Louis. Customers enjoy walking into this 59° space, especially on hot summer days.**

• • •

# Customers Like Special Produce Walk-In; Sales Jump 30% as Losses Drop Sharply

ST. LOUIS—By enclosing its entire produce department in a huge glass and metal walk-in refrigerator, the St. Ann Supermarket has cut shrinkage and spoilage losses from 10% to less than one half of 1% and increased sales 30%.

Until the walk-in was constructed, the market — located west of St. Louis on St. Charles Rock Rd.—was losing from 10 to 13% of its produce inventory value every month in a former store a few doors away, according to Manager Arthur Geissman. In almost every instance, shrinkage and spoilage losses were traced directly to insufficient refrigeration.

All fruits, vegetables, and general produce are kept at a temperature of 59° or less in the novel 22x10 ft. refrigerator conceived by Charles Vatterott, owner, and Mr. Geissman. Customers enter either of two doors.

The enclosure has seven large 4x4 ft., double-pane glass windows which permit a clear view of fluorescently-lighted vegetable displays from any point in the store. Unable to purchase "Thermopane" double glass, the store management constructed its own non-frosting windows by using two layers of plate glass separated by a one-inch wooden molding strip around the edges, through which cold air is forced by means of tiny holes. This keeps visibility into the room at maximum despite sudden changes in temperature.

The rest of the refrigerator is covered with corrugated aluminum roofing sheeting which is kept highly polished to produce a sanitary, eye-appealing effect.

Inside the room are five dry racks for potatoes, carrots, fruits, etc., and three Tyler refrigerated cases which have been converted into simple display units by removing the front glass.

Refrigeration is supplied by a half-ton Carrier compressor, located in the basement, which supplies refrigerant to a circulating blower mounted in the center rear wall. This, circulating 4,500 c.f.m. of air cooled to 50°, is ample to maintain a refrigerator temperature of between 55 and 59° at all times. Fresh air is admitted through a ground-level intake at the back of the blower fixture, which may be regulated down to lower temperatures when necessary.

Results have been excellent, according to Mr. Geissman, with produce shrinkage and spoilage losses being cut down to less than one-half of 1% immediately. Fruit and leafy vegetables alike maintain a richer, more appealing color, and there are far fewer accumulations of "surplus" vegetables which have gone unsold over the day, he said.

"The display was so handsome that we actually had to educate our customers to going inside the refrigerated space to pick out their vegetables," Mr. Geissman added. "Most of them at first believed it was a display of some variety. Now, however, on hot summer days, every customer enjoys a cool respite which had a lot to do with the 30% increase in produce sales we have experienced since it was completed."

## Cheyenne Stores Change To Self-Service Meat System with Reach-Ins

CHEYENNE, Wyo. — Four local food retailing establishments have installed self-service meat departments with refrigerated reach-in self-service cases, and the announcement was made recently in a joint, large-space ad, captioned, "Here's the Biggest Food News In Cheyenne's History!"

The stores are the Black and White Grocery & Market, 16th and Pioneer Ave.; Jack Frost Grocery & Market, 4015 Warren Ave.; Frontier Villa Grocery, Frontier Park; and Van Tassell Terrace Grocery, Van Tassell Terrace.

The stores have installed walk-in coolers and the cutting and wrapping rooms are adjacent to the boxes. All types of meat will be sold in cellophane-wrapped packages, marked as to cut, weight and price.

Greater sanitation and elimination of waiting in line for service will be promoted as advantages accruing to the customers from the self-service meat departments, while the store managers stated they will be able to cut their meat department overhead because fewer employes will be needed. Meat will be cut and packaged prior to the rush hours.

### Dealer Gets Charter

COLUMBIA, S. C.—J. A. Bramlett, Inc., of Greenville, has been granted a charter to deal in refrigerators, stoves, air conditioning and electric appliances. Authorized capital stock is $10,000. J. A. Bramlett is president.

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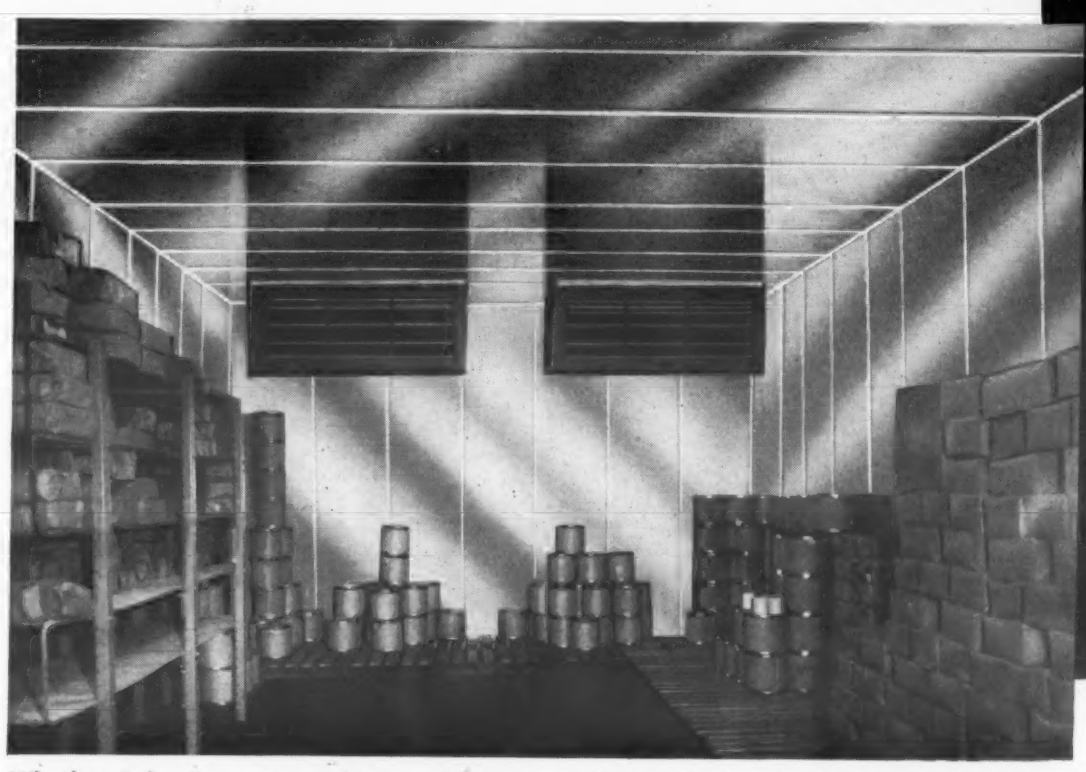

Interior view of modern ice cream plant of Golden Crest Farms Ice Cream Co., New Haven, Conn. Insulated with Ferro-Therm.

Whether it be August or February, ice-cream or frozen foods, there is no denying the efficiency of the modern steel insulation—Ferro-Therm.

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# The KEY to Air Conditioning

*By James J. LaSalvia*

This is the fourth of a new series of articles being published in AIR CONDITIONING & REFRIGERATION NEWS to help dealers and their salesmen cash in on the opportunities awaiting them in the air conditioning field. The market is definitely there, but to tap it you must know the fundamentals of air conditioning and how they are applied.

## Air Requirements

The subject of how much air is required for a certain space or type of system will always be a controversy among air conditioning engineers. The chief point in question (which varies the amount of air) is: At what temperature should the air be introduced to the air conditioned space?

Assume that the space is to be designed for 80° F. Should the air enter the space at 70° F., 65° F., 60° F., or lower? The lower the temperature of the air being introduced, the less is required. Also, the air entering the space must be enough below 80° F. to remove the sensible heat and low enough in moisture content to remove the moisture in the space to maintain 80° F. temperature and the proper relative humidity.

The vast majority of comfort cooling systems will require the following results:

(1) Low first cost of entire system.
(2) Simple operating system.
(3) Low operating cost.

To achieve these results, entering air as low as 60° F. can be used without any formation of strong drafts or uncomfortable reactions on the occupants. Lower temperatures may be used, but extreme care is needed in distribution of the air in the space or bad drafts will occur.

### AIR MOTION

Air motion is a factor under air requirements which must not be overlooked. It is not merely enough to consider what the temperature of the air entering the space must be, but also what kind of an air motion will be in the space.

Air requirements and air motion must be considered together on every system.

Air motion is always referred to as number of air changes per hour, or one air change every so many minutes.

*Example*: The space to be air conditioned is 100 ft. long, 50 ft. wide, and 20 ft. high, and the amount of air being introduced into the space is 9,000 c.f.m. What is the air motion?

Volume of space is 100x50x20

Volume = 100,000 cu. ft.

$$\frac{9000 \text{ c.f.m.} \times 60 \text{ minutes}}{100{,}000 \text{ cu. ft.}} = 5.4 \text{ air changes per hour, or}$$

$$\frac{60 \text{ minutes}}{5.4} = \text{One air change every } 11.1 \text{ minutes.}$$

The air motion on comfort cooling systems should fall between five and 12 air changes per hour.

The reason for the variance is due to the following factors:

a. Ratio of internal sensible heat to total internal heat to volume of space.

The greater the internal sensible heat in a given space the higher are the air changes per hour. Conversely the smaller the internal sensible heat the fewer will be the air changes per hour.

b. The dewpoint temperature of the air leaving the cooling coils.

There is a limit to which the air should be cooled, without reheating. This limit is governed by the dewpoint temperature to which the air should be cooled to remove the required amount of internal latent heat in the space.

The dewpoint temperature of the air leaving the cooling coils will vary between ½° to 5° F. below the dewpoint temperature to be carried in the space, depending entirely upon the amount of internal latent heat to be removed.

1. When the total internal heat of a space consists of 80% to 100% of sensible heat, it will require the most air and will generally require about 10 to 15 air changes per hour, or an air change every four to six minutes.

2. When the total internal heat of a space consists of 70% to 80% of sensible heat, it will require less air and will generally require about eight to 10 air changes per hour, or an air change every six to eight minutes.

3. When the total internal heat of a space consists of less than 70% of sensible heat, it will require still less air and will generally require less than eight air changes per hour, or an air change less frequently than every eight minutes.

### AIR REQUIREMENT FORMULA

The air requirement formula is used to calculate the amount of air required for the system. It is to be used for all cooling and heating systems.

For comfort cooling systems, during the calculation of the refrigeration load it is required that the refrigeration load of the heat of the motor driving the fan and also of the heat picked up by the ducts, be calculated way in advance of selecting the equipment or designing the duct system.

In order to determine the horsepower of the motor intelligently, we must first determine as close as possible the approximate amount of air that is required, by using the air requirement formula, which follows:

$$\frac{\text{Internal sensible heat (B.t.u. per hour)}}{60 \times .24 \times .075 \times \text{DTD.}} = \text{C.f.m.}$$

Where: Internal sensible heat = Heat given off inside of space (B.t.u. per hour)
60 = Minutes in one hour.
.24 = Specific heat of air.
.075 = Weight of one cu. ft. of air.
D.T.D. = Differential temperature difference between room dry bulb temperature to be maintained and temperature of air entering room.

The above formula can be shortened as follows:

$$\frac{\text{Internal sensible heat (B.t.u. per hour)}}{1.08 \times \text{D.T.D.}} = \text{C.f.m.}$$

For an easy rule to arrive at the highest approximate D.T.D., the following can be used: Take the dry bulb temperature as set up for the inside conditions for the space and subtract the dewpoint temperature of the same inside conditions. From the remainder, subtract 3° and the remaining figure is the approximate D.T.D.

This 3° is the allowance made for the heat pick-up, (due to the fan motor and ductwork) on the air before it enters the room. This 3° is only an assumption and the actual heat pick-up may be slightly more or less, but the variance is so small that it can be neglected.

#### EXAMPLE NO. 1

Given 100,000 B.t.u. per hour as the internal sensible heat of a given space, and the inside conditions are 78° F. d.b. and 62° F. d.p. temperature, what are the approximate air requirements?

$$\frac{100{,}000 \text{ B.t.u. per hour}}{1.08 \times (78° - 62° - 3°)} = \text{C.f.m.}$$

$$\frac{100{,}000}{1.08 \times 13°} = 6970 \text{ C.f.m.}$$

After the approximate air quantity has been determined, another assumption must be made, and that is the horsepower of the motor which will be required to handle the volume of air at the required resistance. The resistance generally runs between .75 in. wg. to about 1.5 in. wg. For these resistances a fan will require 1 hp. to handle about 3,000 c.f.m.

#### EXAMPLE NO. 2

In example No. 1 the approximate air quantity is 6,970 c.f.m. What is the horsepower required for the refrigeration load? What size motor should be used?

$$\frac{6{,}970 \text{ c.f.m.}}{3{,}000 \text{ c.f.m.}} = 2.3 \text{ hp.}$$

The 2.3 hp. should be included in the refrigeration load.

The size of motor used would be the next size for commercial use which would be a 3-hp. motor.

#### EXAMPLE NO. 3

Given 100,000 B.t.u. per hour as the internal sensible heat of a given space and the inside conditions are 80° F. d.b. and 60° F. d.p. temperature,

a. What are the approximate air requirements?
b. What horsepower should be used for the refrigeration load?
c. What size motor should be used to drive fan?

$$\frac{100{,}000 \text{ B.t.u.}}{1.08 \times (80 - 60 - 3)} = \text{C.f.m.}$$

(a) $\frac{100{,}000}{1.08 \times 17°} = 5450$ C.f.m.

(b) $\frac{5450 \text{ C.f.m.}}{3000 \text{ C.f.m.}} = 1.8$ hp.

(c) Use a 2-hp. motor to drive fan.

#### EXAMPLE NO. 4

Given 100,000 B.t.u. per hour as the internal sensible heat of a given space and the inside conditions are 83° F. d.b. and 60° F. d.p. temperature,

a. What are the approximate air requirements?
b. What horsepower should be used for the refrigeration load?
c. What size motor should be used to drive fan?

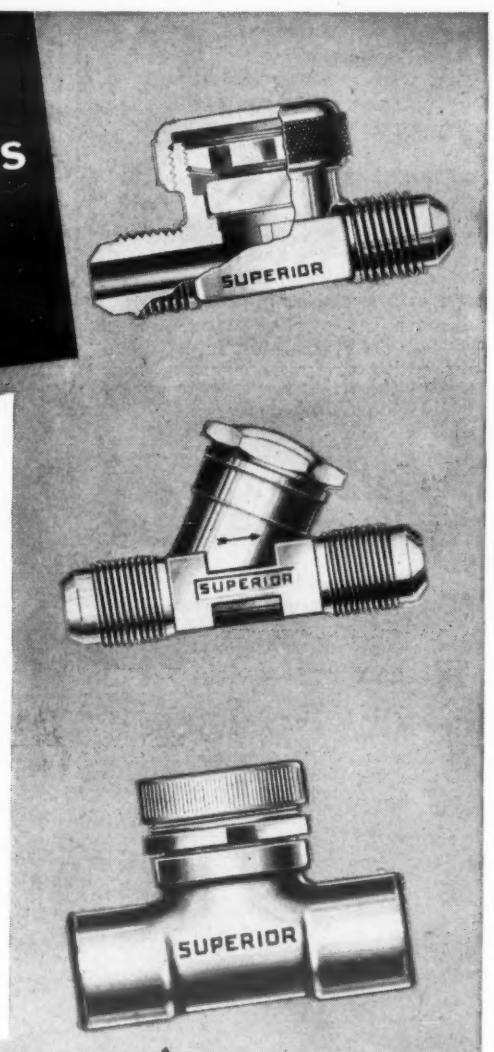
(a) $\frac{100{,}000 \text{ B.t.u.}}{1.08 \times 20°} = 4630$ c.f.m.

(b) $\frac{4630 \text{ c.f.m.}}{3000 \text{ c.f.m.}} = 1.5$ hp.

(c) Use a 2-hp. motor to drive fan.


Superior

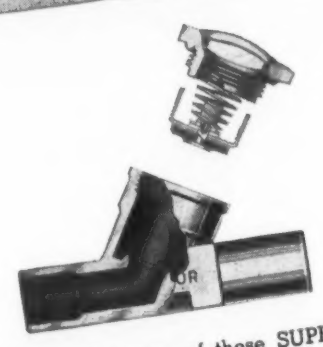
"Non-Chattering" CHECK VALVES AND LIQUID INDICATORS



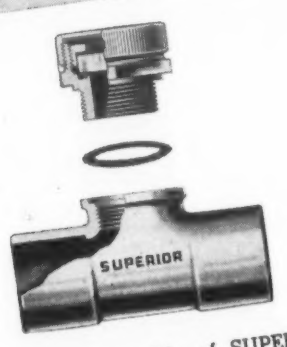

**SUPERIOR CHECK VALVES**—unique design, positive acting, spring-operated—cannot chatter, hum or buzz under any normal operating conditions. Pressure drop is negligible. Install one in the suction line of each low temperature circuit of all low temperature jobs—your assurance of maximum performance and trouble-free operation.

**SUPERIOR LIQUID INDICATORS**—call them liquid indicators, sight glasses, or refrigerant shortage detectors—one should be installed in the liquid line of each system. Seal cap over sight glass is double assurance against damage and leaks.

Note these exclusive features



The novel design of these SUPERIOR Check Valves permits the easy removal of all internal parts—**as a unit**—while soldering lines to valve connections, or for subsequent inspection.

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# Annual Usage of Air Conditioning Systems Varies Widely with Type of Installation, According to Estimates for Utilities

CHICAGO—Operation of air conditioning units throughout a year averages all the way from approximately 600 hours annually for a room unit in some private offices to as much as 8,700 hours for certain industrial processes, noted A. B. Newton of Airtemp Division, Chrysler Corp., in a discussion before the Midwest Power Conference here.

Air conditioning compressors of the larger sizes, from 15 to 100 hp., are generally installed in so-called central station jobs; the compressor or compressors each cool one or more coils over which air is circulated to the conditioned spaces.

These compressors, if equipped with capacity unloaders, are infrequently started and stopped. Without unloaders reduced voltage and manual starting is more often required. However, the nature of these installations is such that an adequate polyphase power supply is usually available.

The most frequent exception to this ready availability of power is in the residential retail shopping centers where the larger compressors are used, for example, in theaters and sometimes in bowling alleys.

There is at present an inconclusive amount of data regarding hours of annual operation for this class of installation, but the accompanying tables will give approximations until more complete data is available, he said. It should be noted that this class of installation inherently carries sufficient usage to make a desirable load.

Air conditioning compressors of the medium sizes, in the range from 2 to 10 hp., probably have by far the greatest future use both in number of installations and in horsepower, he stated, yet it may be in this classification that the greatest additional power supply services are required.

The most popular equipment is the 2, 3, and the 5 hp. unitary air conditioner. Indeed, use of these units in multiple on larger and larger jobs is increasing literally by leaps and bounds, said Mr. Newton.

For example, several large department store and office building jobs have recently been installed with between 60 and 100 units of 5 hp. each. In these large unitary jobs yearly operation is about as indicated in the above mentioned table.

However, this range of sizes is also used in smaller buildings which require from one up to nine or 10 units. In downtown or industrial districts nearly all these units are installed on polyphase service. In outlying districts such as residential business centers it is often more convenient to install 230-volt single phase units, particularly if the 2 or 3-hp. size is to be used.

The second table gives approximate hours of usage for air conditioning compressors in medium size jobs. These figures are from limited data, and anyone who can contribute additional data will perform a real service to the industry by doing so.

The room air conditioner is the smallest compression type equipment made in large quantity and has its own special power problems. The range of sizes is from ½ to 1½ hp., with the ¾-hp. window unit by far the most popular.

In this size the compressor and fan together are usually limited to 1,300 to 1,400 watts at conditions generally encountered.

However, since these units go into residences, offices, hospitals, hotel rooms, and other similar places and are installed without permanent wiring, they usually are plugged into 115-volt single phase supply. Almost without exception they are manually started and stopped, and seldom more than twice a day.

In spite of the thousands of room air conditioners in use, less data is available as to annual usage than with other sizes and types of air conditioning apparatus. Yet perhaps such data would be most useful to those interested in generation and distribution of power. The third table shows the best available estimate we have of hours of use of this class of equipment.

### Table 1--Central Station Installation Usage

| Type of Installation | Range of Hp. | Typical Annual Hours Operation |
|---|---|---|
| Theater | 10 to 100 | 1,500-3,000 |
| Department Store | 10 to 300 | 2,000-4,000 |
| Industrial Comfort | 10 up | 1,500-5,000 |
| Industrial Process | 10 to 75 | 2,500-8,700 |
| Restaurant | 10 to 75 | 1,000-2,500 |
| Office Building | 10 to 1,500 | 1,200-4,000 |
| Hotel Rooms | 10 to 500 | 1,500-3,500 |

### Table 2--Usage In Medium Size & Unitary Systems

| Type of Installation | Range of Hp. | Typical Annual Hours of Cooling | Typical Annual Hours for Heat Pump |
|---|---|---|---|
| Theater | 5- 75 | 1,800-3,600 | |
| Specialty Store | 3- 50 | 1,200-2,000 | |
| Office Suite | 2- 15 | 1,000-1,800 | |
| Professional Office | 2- 10 | 800-2,000 | |
| Single Apartment | 2- 5 | 800-1,600 | 2,500-4,000 |
| Residence | 2- 6 | 800-1,600 | 2,500-4,500 |
| Hospitals | 2-100 | 1,200-3,000 | |

### Table 3--Usage of Room Air Conditioners

| Type of Installation | Typical Annual Hours of Use |
|---|---|
| Private Office | 600-1,500 |
| Hospital | 1,200-2,500 |
| Professional Office | 800-1,500 |
| Hotel Rooms | 1,200-3,000 |
| Residence | 900-1,800 |

## 'Battleship' Walls Cut Load Requirements

ST. LOUIS — Because of "battleship" wall construction, the revolutionary new office building of Concrete, Inc., St. Louis building materials firm, here, requires only five tons for air conditioning 2,500 square feet, according to Ray Powell, president of the firm.

Walls of the building, which contains eight general and executive offices, are of eight-inch reinforced concrete, furred out two inches and insulated with cotton paper batts. The roof is constructed with seven inches of reinforced concrete, on top of that, five inches of Zonolite concrete, and a builtup composition roof.

With these tremendously thick walls, a 5-ton package air conditioner maintains a comfortable 80°.

## Carrier Shows Window Unit

ST. PETERSBURG, Fla. — First showing of the new Carrier ¾-ton window air conditioning unit, took place recently before a gathering of the Southeastern Florida distributors at the Suwannee hotel.

It was said to be the first showing in the country by Carrier, for which Otto Krauss Heating and Ventilating Company is the local representative.

According to Krauss, the proposed air conditioning installation in the new Maas Brothers store here is one of the largest of its type in the state. Among installations he has handled for Carrier are those at McCrory's, First Federal Savings and Loan, and Suwannee hotel.


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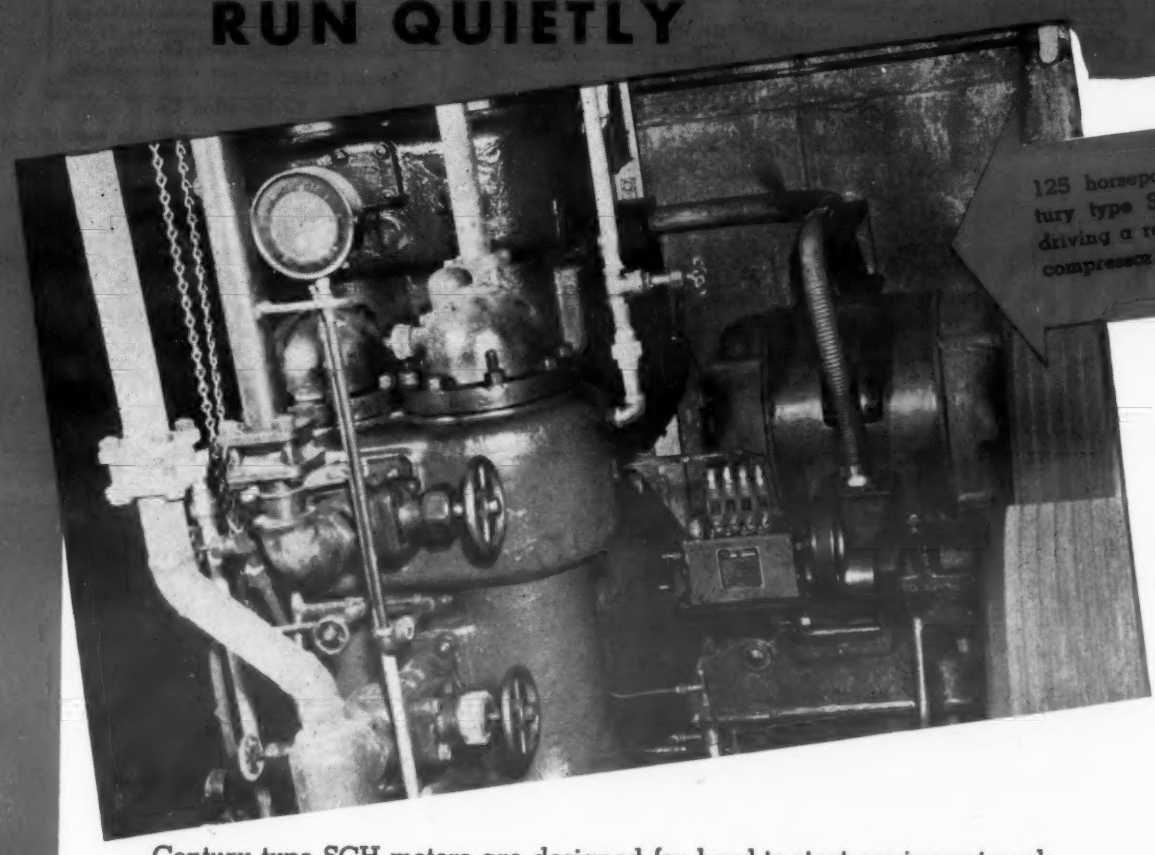


Century type SCH motors are designed for hard-to-start equipment such as compressors under load. They have the necessary high starting torque to bring compressors up to speed smoothly and quietly, using a minimum of starting current.

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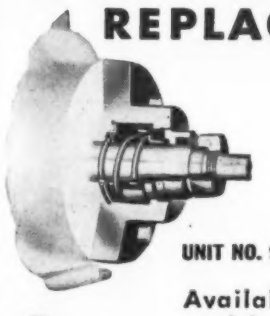

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*Refrigeration and Air Conditioning Directory*

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## Bescher To Replace Perry At Interstate Power Co.

DUBUQUE, Iowa — Promotion of F. E. Bescher to business development manager of the Interstate Power Co. here has been announced by B. F. Pickard, president.

Mr. Bescher succeeds L. L. Perry, who has resigned effective Sept. 1 to enter the photography business, Mr. Pickard said.

Mr. Bescher came to Interstate Power in 1928 as assistant general manager. He rose to supervisor of the Dubuque district in 1933 and to director of lighting in 1937.

He started in the utility business in 1920 as assistant to the manager of the Richmond, Ind., Electric Co. In 1927 he became division commercial manager of the Interstate Public Service Co. of Monticello, Ind. He resigned this position the next year to join the utility here.

## *Appliance Outlet Schedules Second Frozen Foods School For Home Freezer Prospects*

FORT WAYNE, Ind. — A second frozen foods school, intended to explain frozen foods and home freezers to home freezer prospects, has been scheduled by the Schueler Appliances and Radio Sales stores here for Aug. 27, according to store officials.

The program will be held in the Indiana Service Corp.'s leisure home beginning at 10:30 a.m. and concluding at 2 p.m., they said.

The Schueler firm held its first school on Aug. 6, demonstrating to 65 housewives the advantages of frozen foods and how to store them in a home freezer.

Both representatives of the dealer and of the Whiting Freezer Corp. explained the processing and preparation of frozen foods. A luncheon prepared entirely from frozen foods was served at the end of the meeting.

## Schurra Is Appliance Buyer At Whitney's Dept. Store Of San Diego, Calif.

SAN DIEGO, Calif.—Henry Schurra has been appointed appliance buyer for the new major appliance department of Whitney's department store here. Lester J. Wilkin, vice president of the company, made the announcement concurrently with the completion of the $12,000 renovation of the department.

Visible from three sides, the new department contains 300 sq. ft. of space for each major appliance department. Eye-appealing features include cold lighting, cold cathode signs, and completely "live displays" throughout.

In addition to demonstrating ranges, refrigerators, laundry equipment, etc., there is a "demonstration stage" for vacuum cleaners, sewing machines, washing machines, ironers, quick freezers, and heating appliances. Franchised with eight leading national lines, the department will be among the largest in San Diego.

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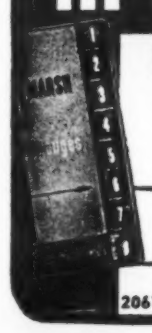
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# Refrigeration Problems

## And Their Solution

***By P. B. Reed***

**For Service and Installation Engineers**

**Manager, Refrigeration and Air Conditioning Division, Perfex Corp.**

## Making Money In a Service Business (8)

### MAKING AN ACCURATE BID

How budget percentages are used in costing and pricing a bid, is shown in the following example:

The contractor whose budget is shown above, is called upon to give a price to a new chain store just coming into town, to install some equipment which they will furnish. The contractor is to furnish only the labor and installation material: tubing, fittings, line valves, dehydrators, and refrigerant. Also, he must include permits and inspection fees on the refrigeration equipment, but the chain store will pay directly for the wiring and plumbing necessary.

He wants this job. He wants to get started with this new chain who may bring other stores into town and he wants the service, so he is willing to forego any Net Profit on this particular job.

### PERCENTAGES FROM THE BUDGET

He makes up a bill of materials and its *cost* comes to $40.36. He estimates the direct labor *cost* at $39.50. Mileage is only 60 cents and Permit and Inspection Fees are $5.20 so his Direct Cost is $85.66. His average yearly Overhead is 27.7%. The $85.66 is, therefore, 72.3% of his total cost. This total cost of labor and material, *including Overhead* is, therefore $85.66 ÷ 72.3% (.723) or $118.48.

### HIS TOTAL BID

He could bid $118.48 but he would not make any *real profit,*—no Net Profit. Nor would he lose anything, unless the material used exceeds $40.36 or unless his men run into trouble and take longer than he estimated. If he has estimated material and labor correctly, he should come out even at $118.48. He has all of his direct and indirect costs in $118.48. The only thing he doesn't have in it are Income Taxes and Net Profit.

If he bids his total *cost* to get the business, then he would bid $118.48, and he might do so on this particular job in order to get "in" with this new chain.

Normally, however, he would include his Net Profit. His true Net Profit is 6.7% for the year, but that does not include income taxes. If he merely added on enough to give himself a 6.7% profit, he would divided $118.47 by 93.3% so his bid would be $127.00 or a profit difference of $8.52. Income taxes would take about one-fourth of this $8.52 so his true net profit would be only about $6.52 or 5% instead of 6.7%.

Therefore, to get a Net Profit After Taxes of 6.7% he would have to figure on a Profit Before Taxes of 8.7% (see P and L Budget) so he would divide $118.48 by 91.3% instead of 93.3%. This would give him a bid price of $129.77.

A bid price of $129.77 would give him his direct cost of $85.66 and his overhead of $32.82, leaving $11.29 "profit." His silent partner, "Uncle Sam" gets $2.60 of the $11.29 leaving the contractor a net profit, for all his trouble, of $8.69.

### LITTLE DIFFERENCE IN BIDS POSSIBLE

This example goes to show just how little variation in bids is actually justified.

The most that this contractor could have cut off his normal price of $129.77 was $11.29, without losing money!

If a contractor is a good businessman, keeps records and knows what his costs are, there is very little difference between his normal price and his "rockbottom" price. The difference is merely his Profit Before Taxes, and the probabilities are that it is not over 10%.

So, on the same job, if the bids of two competitors in the refrigeration service and installation business (or most any other business for that matter) are more than about 10% apart:

1. One must have a marvelously efficient operation, which is not likely—some difference yes, but not much.

2. One of them (either the high bidder or the low bidder) just does not know his costs; he is bidding wild, with complete disregard for costs, just to "get the job," or to make plenty on that one job.

3. One of them may be skinning the job, i.e., putting in inferior material, leaving out valves, etc., or rushing the job in with careless workmanship or slip-shod methods.

### MUST KNOW HIS COSTS

A dealer, contractor, or independent service operator, large or small, wherever he is, whatever class of work he is doing *had better know his costs* especially from now on.

If he doesn't, he is simply guessing when he prices a job or makes an estimate; or perhaps he is just following the other fellows' prices—"meeting competition." That is dangerous; the other fellow may not know any more about costs than he does.

If his price is too high, he doesn't get the business, if it is too low he loses money. The difference between "too high" and "too low" is usually very little, but it is the difference between staying in business and going out of business. In order to stay in business, build up the business, furnish good equipment and materials, do good work, maintain a reputation for fair dealing and responsibility, *he must make a profit—a net profit.*

In late years there is a rising tendency in some quarters, to sneer at those who make a profit, as if it were Shylock's pound of flesh. We must stop that sort of alien philosophy.

### PROGRESS THROUGH PROFIT

Profit is what we don't eat up; what we have left to progress with. Without it we live hand-to-mouth, a precarious existence without the means to grow and build.

A "reasonable" profit (and nowadays it is extremely difficult to make *that* much profit, let alone an exorbitant profit) is what buys the new drill press, enlarges the shop, and puts on another man. It is what buys the farmer's new tractor, what built the railroads, what keeps the wheels of industry turning and provides jobs and a scale of living for the common man far beyond Solomon's or Caesar's wildest dreams of luxury.

*(To Be Continued)*


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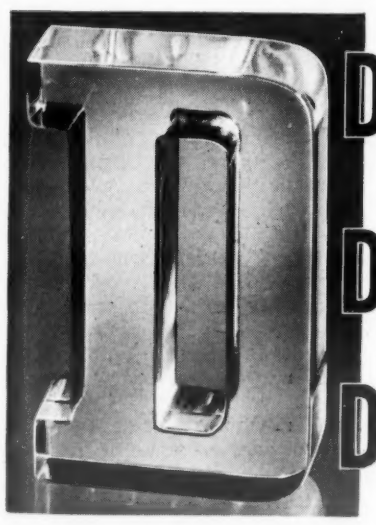

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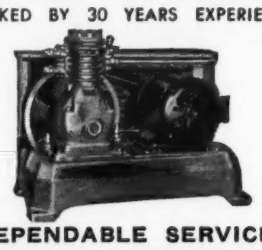

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# The Home Freezer

## How Special Design and Layout of Vital Parts Aid Freezing, Storage of Foods

By John E. Nicholas, Professor of Agricultural Engineering
Pennsylvania State College

This is the concluding instalment of an article by Prof. Nicholas, who has spent considerable time in studying and testing home freezer construction and operation. The article offers some of his conclusions about home freezer size, design and components, and use.

The article was originally presented as a talk before the 1947 Georgia Frozen Food Conference, sponsored by the College of Agriculture at the University of Georgia, and the Georgia Frozen Food Locker Association.

### *Condensing Units*

The present trend in condensing units for use on home freezers is toward those having the motor and compressor hermetically sealed inside a gas tight container, having no shaft seal or other sources of possible leakage. The compressor pumps used in these units can be either the reciprocating or the rotary design, as have been used on open type small machines.

The V-belt, motor-driven, open type condensing units are used on the larger freezer cabinets and for walk-in freezers, and the use of the open type units will prevail for some time to come on sizes larger than 3 hp. and on remote installations not factory connected. For a comparison between the "hermetic" and "open type" condensing units, there is shown below the advantages for each type:

* * *

**HERMETIC**

1. Quieter operation, as the moving parts are enclosed.
2. Possible low manufacturing cost.
3. Less chance for refrigerant and oil losses—no shaft seal.
4. No difficulty from belt failures and replacements.
5. No oiling of motor by owner, and resultant service trouble from oiling neglect.

**OPEN TYPE**

1. Can be serviced in field in case of trouble. Hermetic power unit must be returned to factory for repair and entirely replaced if it fails.
2. Usually operates slower speed; most sealed types run at 1725 R.P.M.
3. Slightly better operating efficiency, though too small for serious consideration.

* * *

Sealed units having gravity condensers use a capillary expansion device. These types of units are commonly used on cabinet sizes of from 3 to 6 cubic feet net storage capacity, and are generally one temperature for food storage only.

A hermetically sealed condensing unit may be built with a fan cooled fin type condenser, and with a receiver. The receiver could be omitted for a one-temperature cabinet using a capillary tube expansion device, but this omission is questionable. The fan air cooled condensers are used on units in sizes of ¼ to 3 hp. inclusive, and have a higher operating efficiency than those equipped with gravity condensers.

A standard V-belt driven open-type condensing unit with a fan air-cooled fin-tube condenser, with a receiver, is manufactured in sizes from ¼ to 3 hp., inclusive, and larger sizes are usually furnished with a water-cooled condenser or used with an evaporative condenser.

Any condensing unit to be used on low temperature operation differs only from a higher temperature machine in that it operates at a lower suction pressure and, with the same displacement, would have less capacity and load. For a given motor size, the low temperature machine just has more displacement capacity, and is thus different from a high temperature condensing unit by having larger pistons or being driven at a higher speed. These low temperature machines will not carry high suction pressures for any length of time, and means must be taken to protect the unit from high suction pressure.

### *Evaporators*

There are many types and arrangements used in the placement of evaporators in self-contained food freezer cabinets, but, generally speaking, they fall within the following classifications:

1. *Wrap-around-coils,* which are wrapped around the inner liner and within the insulation space. This type of evaporator is inexpensive to install and can be used on either the "chest" or "vertical" type cabinet. As explained in this section, under "Insulation," care must be taken to seal both the inner and outer liner to prevent vapor transfer to the insulation.

These coils should have a metallic adherence directly to the inner liner and should be flattened against the inner liner for maximum contacting surface. Coils should be coated on the side towards insulating material so as to cut down the heat transfer from insulation to evaporator.

2. *Stamped Plate Coils for Inner Liners,* which are used to give the same results as the wrap-around-coils, and these coils serve as the inner cabinet wall as well as the evaporator. Stamping of coil can be such as to give a serpentine flow of the refrigerant, or can be made to flow through headers. These plate coil liners can also be arranged for use with either the "chest" or "vertical" type cabinet.

3. *Plate Coils for Divider Sections or Shelves* are used for "chest" type and for "vertical" type cabinets. This type of evaporator arrangement is more expensive than those used on the walls of the inner liner, but is used on units above 8 cubic foot capacity so as to have all food in the cabinet near the cooling surface, more even cabinet temperatures, to permit quicker freezing by direct contact with the cooling surface, and to divide the storage compartment for easier accessibility to the packaged food.

4. *Eutectic Plates,* can be used for food freezers in the same manner as the stamped plates described. They are constructed by installing a system of metal tubing between two metal plates, and refrigerant flowing through the tubing and a "holdover" special freezing solution used between the exterior of the tubing and the interior of the plate walls. This type of plate evaporator has the advantage of keeping a lower cabinet temperature longer in case of mechanical or power failure, and also gives a longer cycle of operation to the condensing unit. It has the disadvantage of being extremely difficult to defrost and is more expensive than the ordinary stamped plate.

For the walk-in freezer, there is also used either the "stamped" plates or "eutectic" plates, as described above, and these can be used for shelves, or can be mounted on the ceiling. Fan unit coolers are also used for walk-in freezers to obtain automatic defrosting. There are three common defrosting methods used for unit coolers, namely: (a) water, (b) electric, and (c) hot gas.

All three methods seem to be successful, though great care should be exercised in the installation of water spray defrosting with temperatures at zero or below. Both the water supply and drain connections to unit cooler must be very close to outside ambient air and well insulated to prevent freezing.

### *Refrigerant*

Of the many refrigerants from which to select, the manufacturers of home freezers have almost universally chosen "Freon-12."

The refrigerant is clear and water white, almost odorless, even at higher concentrations, non-irritating, non-toxic, non-flammable and non-explosive. It has no effect on any material being refrigerated as it is not absorbed by, nor affects the odor, taste, color or structure of any food. This is particularly important in the event the refrigerant should accidentally escape from the system.

"Freon-12" has a boiling point of -21.6° F. at atmospheric pressure and can be used efficiently in either the reciprocating or rotary type compressors. It is non-corrosive to all metals used in refrigeration apparatus such as steel, cast iron, brass, copper, tin, lead, zinc, and aluminum, thus permitting the manufacturer a wide selection of materials from which to design and build the refrigeration cycle.

Another, and one of the newer "Freon" refrigerants, namely "Freon-22," was introduced to the industry in 1936. It is a substitute for "Freon-12," but was especially developed for lower temperatures than those used in home freezing units. "Freon-22" has a boiling point of -41.44° F. and it is also non-toxic, non-flammable, non-explosive, and non-corrosive to metals. It is especially adaptable for commercial installations, and is only necessary for use in farm and home freezers for below standard temperatures to obtain exceptionally quick freezing where time and space are limiting factors.

### *Refrigerant Expansion Devices*

The present food freezers use one of two types of expansion devices, the expansion valve or the capillary tube. The object of these expansion devices is to regulate the flow of liquid refrigerant into the evaporator at a rate which equals the rate of condensing the gaseous refrigerant back into liquid by the condensing unit. In the case of the expansion valve, it will close and prevent refrigerant from entering the evaporator after the compressor stops, or if for some other reason the evaporator pressure increases.

In a refrigerating system the refrigerant pressure has a definite corresponding temperature based upon the particular refrigerant being used. The thermostatic valve is controlled by the difference between the temperature of the refrigerant as reflected by pressure in the valve and the temperature of the thermostatic bulb as reflected by the pressure in the power element and bulb. The valve does not control temperatures directly.

The big advantage of a thermostatic valve over a straight expansion valve is that it keeps the coil

*(Continued on next page)*

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Every store selling Frozen Foods, from small grocery store to giant superstore, wants one —needs one!

Open top display shows the foods, makes self-service easy, rapid, satisfactory.

Heavy duty compressor.

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Dealers can invite their customers to "walk in and get one" because they are ready for immediate delivery.

Shiny and attractive in appearance and easy to keep that way. All metal clad inside and out, built for permanence and service.

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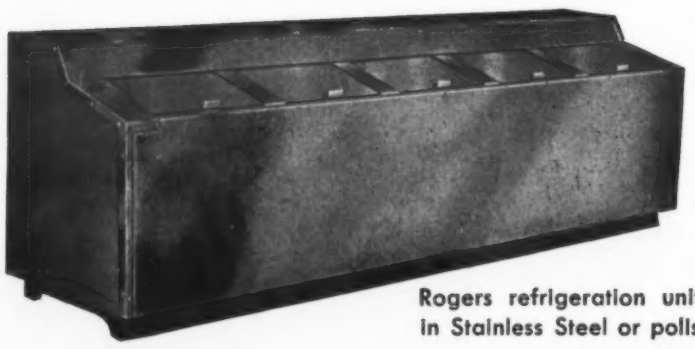

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That briefly, is what the Hubbell-Yoder system of Complete Surface Freezing means when the chips are down. Would you like to know how it can be adapted to your requirements? Write, wire or phone.

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THE YODER CO. Refrigeration Division
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# How Expansion Valves, Capillary Tubes Maintain Low Home Freezer Temperature

*(Continued from preceding page)*

full of refrigerant and thereby secures the maximum active surface.

All thermostatic expansion valves consist of a pressure responsive member, a diaphragm or bellows, a throttling valve, and a means of connecting these elements. A manual adjustment, either external or internal, consisting of an adjustable spring tension against one side of the flexible element is embodied in most valves.

Many adjustable expansion valves have no external adjustment and are set at the factory for a specified superheat. Most expansion valves are adjusted for approximately 10° F. superheat setting.

The thermostatic bulb is generally clamped to the suction line close to the evaporator. The bulb should also be located in the coldest portion of the cabinet if there is much temperature difference throughout the cabinet. This will prevent the bulb from warming up faster than the evaporator and will prevent the valve from opening after the compressor.

For smooth operation of the thermostatic expansion valve, it is well to locate the valve itself in a position which is warmer than the control point. Best operation is secured with the valve entirely outside the refrigerated space.

Expansion valves used on freezer units must be so constructed that they remain closed and allow no refrigerant to flow until the suction pressure has been reduced to 15 pounds or less. Various means are used by different manufacturers to accomplish this result, the simplest being the limited charged power element. Unless this type of valve is used, difficulty will be encountered in starting a warm unit. The suction pressure will be excessively high and it may be necessary to manually throttle the suction valve on the compressor.

The straight expansion valve is sometimes used, and is, for all practical purposes, the same valve as the thermostatic expansion valve except that the thermostatic power element has been omitted. This valve operates at a fixed and pre-determined pressure, irrespective of the temperature of the evaporator. It has the disadvantage in that the only cut-out point is the entire surface of the evaporator active. It also has the disadvantage that a cold control cannot be satisfactorily applied. It does have the advantage, however, of simplicity, easy starting and pull-down, and lower cost. A thermostat must be used with the straight expansion valve; the bulb located preferably on the suction line and not in the air space.

Capillary tubes have been used on small cabinets where simplicity and economy were of utmost importance. They should only be used on a constant temperature cabinet, as considerable capacity is sacrificed where the cabinet temperatures and the suction pressures are varied.

Capillary tubes, like other expansion devices, attempt to supply the evaporator with refrigerant as fast as it is formed. It does this by passing a greater amount of refrigerant when passing liquid than when passing gas. The flow of refrigerant through a capillary tube varies about as the 5th power of the diameter and inversely as the length.

When using capillary tubes, a thermostatic control is necessary, inasmuch as the pressure during the off cycle equalizes between the high and low side, thus prohibiting the use of a pressure control. The control in this case is directly from the air temperature within the freezer cabinet.

This device can be so proportioned that in a certain range of pressure the evaporator is kept flooded and pull down curve is secured which resembles somewhat those of a thermostatic expansion valve. It has a top limit as to how much refrigerant it will pass, depending, however, on the original proportioning of the tube. For this reason, some space must be allowed on the high side of the unit for operation when the evaporator is exceptionally warm, otherwise very high heads may be experienced with subsequent damage to the compressor. This is true if the evaporator holds any appreciable amount of liquid refrigerant. It is also the reason why the capillary has been used most successfully on the smaller freezer cabinets and household units.

When using a capillary tube the refrigerant charge must be very accurately made, as in these units the entire charge is always on the low side, there being no reserve in the high side. If too much charge is used, the evaporator will not be completely active. This is one of the biggest drawbacks on the use of the capillary tube, inasmuch as there is no reserve for leaks that are very minute.

### *Defrosting*

The self-contained freezers which are not equipped with any kind of automatic defrosting devices, may be defrosted like the domestic high temperature refrigerators but care should be taken that the food does not thaw during the process.

All of the frozen food packages should be removed from the cabinet, the compressor motor turned off, then the ice or frost removed from the evaporator by scraping or by using a cold water spray, if a convenient drain is placed in the bottom of the cabinet for easy removal of the cold water. After the unit has been drained and cleaned, the compressor started, then the frozen food should be replaced immediately. Warm or hot water should never be used to remove the ice or frost from the evaporator, as this would build up an excessive high pressure within the evaporator and cause difficulty in re-starting the compressor.

A well constructed and properly designed food freezer should not require defrosting over once each year, the fall being the best time. However, there are varying factors that might increase the number of defrosts, such as exceptionally damp climate, heavy usage, etc.

*(Concluded on next page)*


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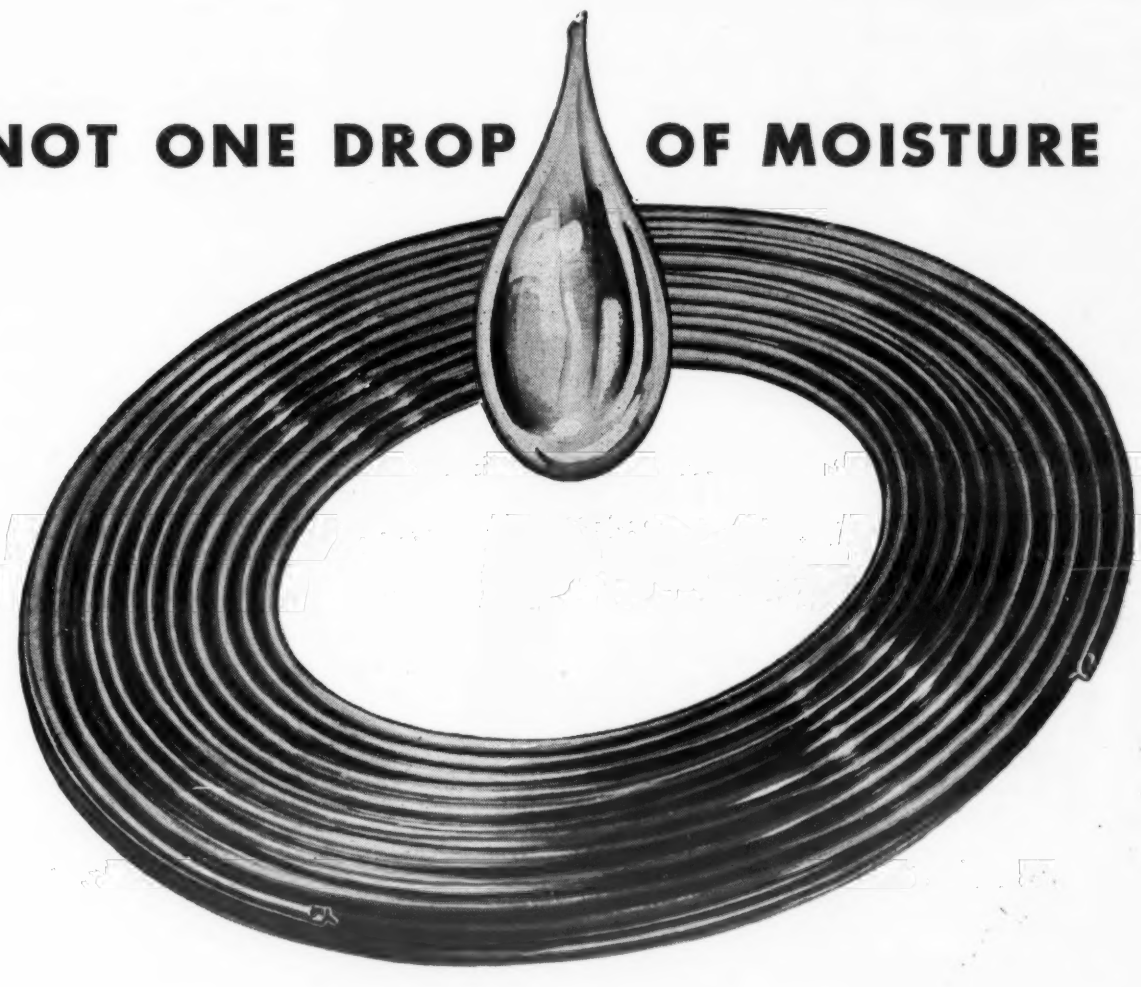

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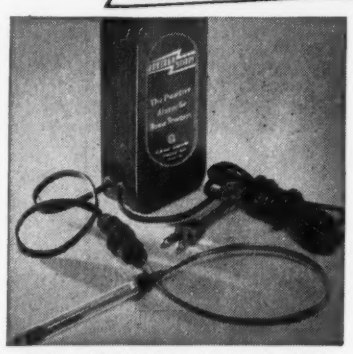

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# Preparing Foods for Freezing In the Home

*(Concluded from preceding page)*

### *Electric Controls*

The electric instruments used on a food freezer, to automatically control the motor of the condensing unit, should consist of a thermostat and motor overload cut-out switch. Sometimes an automatic alarm system is used to warn owner of a rise in cabinet temperature above the danger point.

The motor, motor protection switch, thermostat, etc., are mounted and wired at the factory on self-contained cabinets, and arranged for easy plug-in to electric circuits. Walk-in freezer controls are usually mounted and wired at the site during installation.

The optional alarm system is supplied by a separate electric circuit so that it will give warning in case of failure in the other circuit supplying current to the condensing unit motor and thermostat.

### *Piping System*

Copper or aluminum tubing should be used for all piping where there is "sweat" or moisture prevalent, such as the suction line on the exterior of the cabinet or any gas line going from the outside to the inside of the cabinet. Steel tubing can be successfully used on liquid piping, or on gas piping inside the cabinet where there is always freezing temperature.

Low temperature refrigerant piping should not be joined by using ordinary solder in a sweat connection or a standard flare for a flared connection. Regular solder will tend to weaken under continuous sub-zero temperature; therefore, a special solder should be used having a high percentage of silver. In the case of flare connections, a stronger "double" flare should be used on the tubing, in order to be more certain of a continuous tight joint under the wide range of varied temperatures.

### *Facts on Freezing Foods At Home*

It is essential to wrap all foods air tight before freezing, as frozen foods lose moisture by diffusion through improper wrapping. Failure to protect frozen foods by air tight wrapping is responsible for unsatisfactory results after several months' storage.

Freezing is the preferred method of preserving foods and can be accomplished more quickly and with less labor than other conventional methods of food preservation. Foods should not be re-frozen after thawing, as this is harmful to texture and flavor.

Select products of good quality and at proper stage of maturity. Freezing will only maintain original quality. Foods should be fully prepared for the table or for cooking before freezing. Packages should be of a size to be used at one meal and size will vary with family requirements.

Prepare foods carefully and do not handle more than necessary to prevent bruising. Clean vessels made of enamel, aluminum, or stainless steel should be used in the processing. Iron pans will discolor some foods. Follow pre-treatment directions carefully.

Foods to be frozen should be wrapped in clean moisture-vapor resistant material, such as cellophane, or placed in clean glass jars, lacquered cans, or water-proof paper cans. Packages should be sealed air tight. Cellophane can be sealed with a hot iron. Only outside cartons should be re-used. The use of square jars, and tin and paper cans will conserve storage space.

Exclude as much air as possible from the package of dry packed food before sealing, as this insures best quality. About 10% space must be left in the containers of syrup and brine packed foods to allow for expansion during freezing.

The freezer thermostat should be adjusted to lowest temperature setting before foods are ready to freeze. Quick freezing gives foods the best texture and flavor. The thermostat should be set up to -5° F. after four or five hours. This is the proper storage temperature.

The following information gives only brief instructions as to the pre-treatment, packaging, freezing, and cooking of meats, vegetables, fruits, cooked foods, and pastries.

### *Cooked Foods*

Many cooked foods such as meat and vegetable stew, spaghetti and meat balls, macaroni and cheese, chili con carne, chicken a la king, and similar foods can be cooked in large batches, completely cooled, and frozen for future use.

The cooled food should be packed and frozen in convenient sized waterproof cartons, lacquered tins, or glass jars. It is only necessary to put containers in a pan of water and heat thoroughly before serving.

### *Pastries*

Freezing before baking improves the quality of pastries. Mince and fruit pies, muffins, biscuits, and short breads can be prepared ready for the oven wrapped in moisture-vapor resistant paper, and then frozen. When needed, they can be taken from the freezer and put directly in the oven and baked in the usual manner.

Breads, rolls, and cakes can be stored in the freezer both before and after baking. These products should be carefully wrapped and sealed before putting in the freezer.

## *Demonstration Proves a Point*

Following up her demonstration-talk on the home freezing of foods before a recent meeting of dealers in Wichita, Kansas, Alice Burnett, distributor for Wilson Refrigeration, brings out a frozen pie to prove a point. Looking on (left to right) are: Lee Dewhirst, manager of General Products Co.; Dorothea Hicks, home economist for the Kansas Gas & Electric Co.; and M. W. McKenzie, Wilson factory representative.

### *Fruits*

Fruits should be picked when fully ripe and frozen the same day without delay. They should be carefully inspected and all inferior fruit eliminated.

Solid fruits (apples, peaches, etc.) should be sliced into a white corn syrup solution (1 part syrup—3 parts water) to reduce discoloration. Remove from solution and pack.

Dry Pack—Without sugar or syrup.

Sugar Pack—Mix 3 parts fruit with 1 part dry sugar.

Syrup Pack—Use (1) syrup made with equal parts of sugar and water, or (2) mix 2 parts white corn syrup with 1 part water, or (3) mix equal quantities of syrups (1) and (2). Pack with cold syrup.

### *Meats*

Meats should not be prepared for freezing until the animal heat has left the carcass. Some meats are improved in quality if given an aging period before preparation for freezing. The following aging periods are recommended:

| Variety | Aging Time at 34° to 40° F. |
|---|---|
| Beef | 2 to 3 weeks |
| Veal | 24 to 48 hours |
| Lamb and Mutton | 7 to 10 days |
| Pork | 24 to 48 hours |
| Poultry and Game Birds | 3 to 6 hours |
| Fish | None |

Meat should be cut in convenient sized pieces for the family's use and wrapped without seasoning. Pork sausage and similar products may have all seasoning added. Storage space will be saved if cuts are boned. All meats should be double-wrapped in moisture-vapor resistant paper and tightly sealed. Careful wrapping is essential for successful preservation.

Poultry, game birds, and fish should be carefully drawn, and thoroughly washed. Fryers and fish should be cut to size for frying. Drain well, double wrap, seal, and freeze immediately.

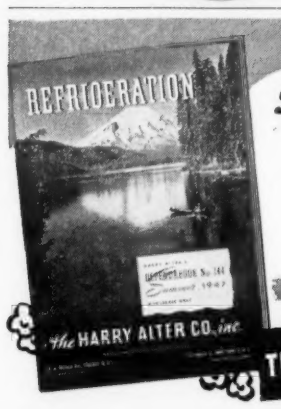
All meats should be frozen at lowest possible cabinet temperature. When completely frozen, thermostat can be turned to -5° F. for holding

Frozen meats should be put in the oven or skillet immediately on removal from the freezer and cooked in the usual manner. It will take longer to cook frozen meats. Good results can be obtained by thawing at room temperature WITHOUT UNWRAPPING. When thawed, remove wrappings and cook.

### *Vegetables*

Pick vegetables at the right stage of maturity for table use. They should not be held after picking.

Sort carefully and prepare the same as for cooking. Wash thoroughly, blanch in boiling water for period specified in table, cook quickly in cold water, drain well, pack, and freeze immediately.

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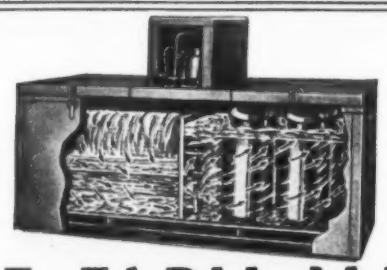

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# OFF THE CHEST

## EDITORIAL TO BE SENT TO 4,000 AT WILSON

Wilson Refrigeration, Inc.
Smyrna, Del.

Editor:

I have just finished reading with interest your excellent editorial, "The Home Freezer to the Rescue," in your current issue.

I would like to place this timely and important message in the hands of every member of our sales organization at once. If this is available in reprint form, I would like to place our order for 4,000 copies.

C. R. MOUGEY,
Advertising Manager

## USING FREEZER TO BEAT HIGH PRICES IS WISE

Emil Steinhorst & Sons, Inc.
612-616 South St.
Utica 3, N. Y.
Aug. 11, 1947

Editor:

Congratulations on the fine editorial appearing in the Aug. 4 edition of AIR CONDITIONING & REFRIGERATION NEWS! "The Home Freezer to the Rescue" is the best sales talk we've read in quite awhile.

Because it also seems to be a "Pep Talk" for freezer dealers and distributors, we are asking you for the right to reprint this article so that we may send copies to our own dealers and distributors. We certainly would like to acquaint them with the convincing material you set forth, and the timely application of Home Freezers to the present problem of High Food Costs.

We should very much appreciate an early reply, as we are anxious to put "The Home Freezer to the Rescue" into the hands of our dealers and distributors.

HENRY STEINHORST

## 'WOMAN'S PLACE IS IN THE HOME'—HE SAYS

Stahmer Coal Co.
135 So. La Salle St.
Chicago, Ill.
Aug. 15, 1947

Editor:

I was particularly impressed with your editorial in your Aug. 4 issue, entitled "The Home Freezer to the Rescue" and would like permission to reproduce this in mimeograph or multigraph form to supply to our freezer dealers, salesmen, etc.

This subject has been treated in a very fine manner and exception is taken to only one part wherein you run away with yourselves to the extent of claiming, it will "save so many hours for Mom each week that she can take a part-time job to augment the family take-home pay."

This we consider downright stupid for the reason that if Mom is to be saved any such time as this it should be offered to her in leisure time to do with as she pleases and we feel very strongly that it would contribute nothing to the sale of home freezers, or any other type of appliance especially where the women are concerned, if you or anyone else, is going to take the stand that it will save her hours that will enable her to go outside of her home and get herself a job.

I might add that, if you see fit to grant the permission to reproduce this editorial for the purpose outlined, that this part will be deleted entirely.

W. L. STRUCKMEYER,
Vice President

## HOME FREEZER SAVINGS CAN EQUAL PAYMENTS

Motor Products Corp.
Deepfreeze Division
North Chicago, Ill.
Aug. 6, 1947

Editor:

I have just had a chance to read your editorial on home freezers, and I want to compliment you and thank you for a real boost to the home freezer industry.

You are so right that it is pathetic—in fact, we are working on a program at the present time that we feel will educate everyone who comes in contact with it on the savings that can be realized through the proper use of a home freezer.

The facts are, today, that a down payment on a home freezer is the last out-of-the-pocket expense that the customer ever pays, because monthly payments can be more than made from the savings realized through the use of a home freezer every month.

"ROCK" SMITH,
Vice President & General Manager

## SWEDISH GROUP NEEDS TRADE BOOKS, MANUALS

The Swedish Society of Refrigeration
Stockholm—Angby, Sweden
May 13, 1947

Editor:

During many years I have followed-up on refrigeration news through your much valued paper. I began therewith already 1930, in connection with my work with the International General Electric Co., Schenectady, N. Y. 1936, I left the United States for Sweden to assist the I.G.E.Co. local agents to organize and develop commercial refrigeration.

Shortly before the war broke out, I made a new connection with the well-known Electrolux organization, just about to take up commercial refrigeration, representing Servel, Inc. of Evansville, Ind. I am now manager of that department.

As mentioned, I have always kept in touch with the refrigeration field through your paper, and I believe I was the first foreign buyer of your Master Service Manual, which I ordered in 1936, just before it came off the press. I still have it. I value all your other publications and I have had much use of them.

In 1942, we organized a society of refrigeration engineers over here, and I was named special agent to the United States in order to establish contact with America.

We over here greet you most cordially and express the firm belief that through correspondence, personal visits and exchange of ideas, expansion and application of the Art of Refrigeration will benefit in a very valuable way.

It would have pleased me very much to have been able to present our Society, its officers, its members and regulations in an up-to-date publication, but we have not issued one printed later than 1944. However, let me say that our society represents an interesting cross-section of factory, sales and service engineers in the refrigeration industry, in a fine-working combination with well-known members from the food, vegetable, fruit-raising, fishing, brewery, and storage industries—about 250 registered members.

Our immediate aim is to establish contact with America for future and mutual cooperation, and we are inviting, and with much interest looking forward to suggestions, an outline from you to a program for this work.

Some questions of interest to us are:

The establishing of a reference library for our members to make possible increased knowledge about all branches of refrigeration and new developments.

The spreading of sound product knowledge.

The training of planning-sales and service engineers.

The requirements and rules for taking membership examinations.

The training of installation and servicemen.

The requirements and rules for taking certificate examinations for installation and servicemen.

The use of moving pictures in all training work (silent or talkies).

To realize some of the above we are in need of publications and printed matters of all kinds. To what extent are you in a position to assist us in obtaining handbooks, publications, government and technical papers, product and engineering manuals, service manuals, instruction courses, moving pictures, catalogs of all kinds and so forth?

Funds at disposal for such developments as outlined above, are at the present somewhat limited as it is necessary for us to organize the work gradually. Of course, all contributions which in the beginning can be obtained in the shape of free publications, and will be gladly accepted.

NELS O. CARLSON,
Special Agent to the
United States

## *New $10,000 Rental Locker Plant Incorporated In Tenn.*

ATHENS, Tenn. — Twin County Frozen Food Locker, Inc., of Athens, has just received a charter from the secretary of state to operate a rental locker plant.

Authorized to begin business on $10,000 capital, the new corporation may issue 2,400 shares of $25 par common stock. The incorporators include Fred Puett, J. G. Willson, and E. L. Willson.

## National Standards Bureau Adds Building Division

WASHINGTON, D. C. — A new Division of Building Technology has been established at the National Bureau of Standards, according to an announcement by Dr. E. U. Condon, director of the bureau.

By no means a finished organization, the new division is made up of a number of sections and parts of sections which have come to be exclusively concerned with various phases of building technology. It is felt that a unified attack on problems can be achieved by concentrating these sections in one division.

The nucleus of the new division consists of five sections: structural engineering; fire protection; heating, ventilating, and air conditioning; exterior and interior coverings; and codes and specifications.

Heating, ventilating, and air conditioning systems and heat transfer through materials and constructions will be the responsibility of the heating and air conditioning section.

The codes and specifications section will carry on work formerly performed in another division on building, plumbing, and safety codes and standards, building fixtures and service equipment, and construction and maintenance practices.

## Westinghouse Television Sets Reach Dealers Nov. 1

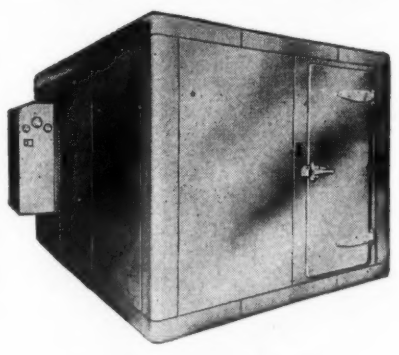
NEW YORK CITY—Entrance of Westinghouse Electric Corp. into the television field was announced here recently by Edgar G. Hermann, home radio sales manager, with the word that their first units would be in the hands of dealers about Nov. 1.

Mr. Hermann made the announcement at a meeting of the New York-New Jersey area distributors, held at the Waldorf-Astoria hotel. He said that the instrument would be of the table-type straight television receiver.

Although no definite price has been determined for the set, Mr. Hermann told the distributors that it would be competitively priced at around $400.

At the meeting, held to present Westinghouse's new radio line, the sales manager said that the radio market has entered a buyers' market where quality products, supported by intelligent selling and educational promotion will be necessary to maintain volume.

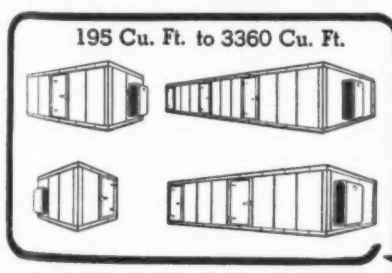

"RECO-FAB"
New Model
ALUMINUM
EXTERIOR AND INTERIOR
FREEZE COOLERS
FOR ZERO OR MEDIUM TEMPERATURES
• LIGHT IN WEIGHT • SIMPLE TO ERECT, MOVE OR ENLARGE



PRECISION MADE!
SECTIONAL CONSTRUCTION!

★ DAIRY PRODUCTS
★ PRODUCE STORAGE
★ FROZEN FOOD STORAGE
★ MEAT STORAGE
★ BLAST FREEZING
★ INDUSTRIAL USES

SIZES FOR *Every* NEED
195 Cu. Ft. to 3360 Cu. Ft.



*Available with* "RECO-PAK"
SELF-CONTAINED REFRIGERATION SYSTEM EQUIPPED WITH BLOWER COIL AND RECOMATIC DEFROST OR WITH SHARP FREEZING EQUIPMENT
RECO
Cable Address "RECO" Phila.
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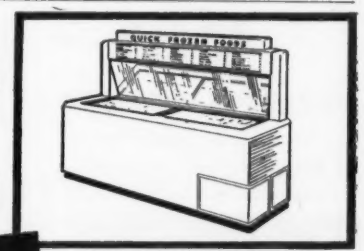
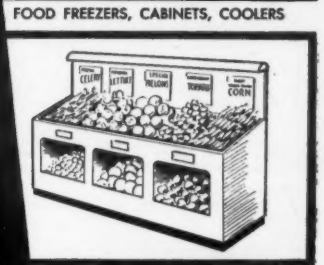
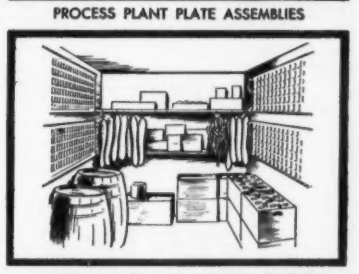
BTC EVAPORATOR PLATES
FOR *Every*
REFRIGERATION APPLICATION


FOOD FREEZERS, CABINETS, COOLERS


COUNTER OR SHELF DISPLAYS

PROCESS PLANT PLATE ASSEMBLIES


LOCKER PLANTS AND WALK-IN COOLERS

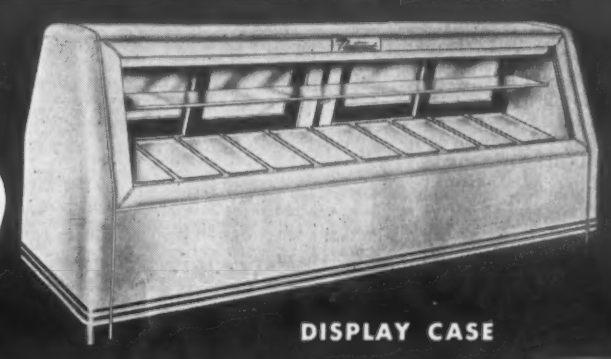
Whatever the commercial or technical application, BTC Evaporator Plates can achieve results not possible with other plates. Ordinary coil or tube plates permit the refrigerant to flow in only one direction. BTC Evaporator Plates with the exclusive "Cross Flow" design have multiple paths for the refrigerant flow — only two seconds travel is required for refrigerant gases to get out of the plate and back into the outgoing channel. This means all surfaces are constantly wetted, low pressure drop is encouraged and uniform refrigeration obtained . . . at lowest operating cost.

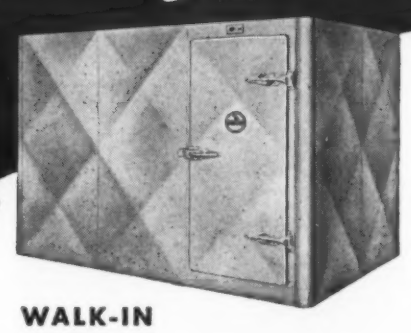
BTC Evaporator Plates can also be easily fabricated into "L", "U", "Step", "Cylindrical", and other special forms without impairing efficiency. Write for your copy of illustrated Bulletin showing many applications for BTC Evaporator Plates.

THE BREWER-TITCHENER CORPORATION
CRANDAL-STONE DIVISION --- BINGHAMTON, N. Y.



Two Outstanding Names in Refrigeration
Fleetwood-Airflow


DISPLAY CASE


WALK-IN COOLER

Fleetwood
Refrigerated Display Cases.
Reach-In Refrigerators.
Flexible Tubing.
Condensing Units.

Airflow
Sectional Walk-In Coolers.
High Market Walk-Ins . . .
Plain Storage Walk-Ins.
Beverage Coolers.
Electric Beer Systems.

Fleetwood-Airflow INC. WILKES-BARRE, PA.
CUSTOM-BUILT EQUIPMENT THAT SETS THE NATION'S STANDARDS

**DON'T REBUILD Armatures**

*Save* BY BUYING NEW

**WAGNER Armatures**

They have new core iron and windings, new commutators properly undercut, new shafts, new centrifugal short circuiting devices, new rocker arm and brush holder assemblies with brushes. They are dynamically balanced, fully tested, ready to install. Get them now from your Wagner distributor. Name on request. M47-26

Wagner Electric Corporation
ESTABLISHED 1891
6471 Plymouth Avenue, St. Louis 14, Mo., U. S. A.
ELECTRICAL AND AUTOMOTIVE PRODUCTS

NIAGARA

**AEROPASS* CONDENSER**

. . . increases refrigeration plant capacity; saves power and water.

Patented features: "duo-pass" coil keeps condenser tubes free from scale; "oilout" constantly cleans oil and dirt from the refrigerant. "Balanced Wet Bulb Control" maintains minimum practical compressor head pressure.

**NIAGARA BLOWER COMPANY**
*30 Years of Service in Air Engineering*
405 Lexington Ave. New York 17, N. Y.
*Trade-mark registered

*Tells instantly if the system is wet!*

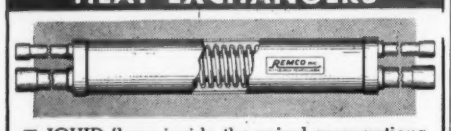
DFN

**MOISTURE INDICATOR**

For Freon and Methyl Chloride. Accurate, foolproof, simple, inexpensive. See your jobber, or write.

McIntire Connector Co.
Newark 5, N. J.

**REMCO "Liquid-Fin" HEAT EXCHANGERS**



LIQUID flows inside the spiral corrugations in "prime" heat exchange relationship with the colder higher velocity suction gases which travel outside the rapid-transer "Liquid-Fin" heat exchanger element. Capacity per unit size is very high. No. 4

ASK YOUR WHOLESALER . . . OR WRITE
REMCO, INC., · · · PITTSBURGH 1, PA.

## Frame Institute To Open Branch School In Miami

MIAMI, Fla. — Space has been leased in the Aviation building, 3240 NW 27th Ave., by Herbert Frame, for the purpose of establishing a Miami branch of the Frame Refrigeration-Electrical Institute, Inc., of Baltimore, Md.

A staff of instructors have been brought from Baltimore. These instructors will conduct day and night classes for civilians and GI's in mechanical refrigeration and related subjects.

The institute was organized in 1935 and operated through 1941, when activities were suspended because of the war. The institute was reactivated in February, 1946.

## Lynn Eaton Named Director Of Districts for Bendix

SOUTH BEND, Ind. — Promotion of Lynn Eaton to director of districts is announced by W. F. Linville, general sales manager for Bendix Home Appliances, Inc. He will direct the company's field sales representatives and oversee distributors' sales operations.

Since 1945, Mr. Eaton had been eastern regional sales manager. He joined the company a year earlier as New York divisional sales manager.

## *New Monitor Outlets Open In Three West Coast Cities*

LOS ANGELES—Electrical Appliance Service Corp. has been opened at 726 Venice Blvd. here as parts and service headquarters for Monitor home appliances, according to an announcement by the company.

Branches have also been opened at 302 17th St., San Diego and 236 Harriet St., San Francisco.

## *Weston Sales, Service Expands*

WILKINSBURG, Pa. — With a 300% sales increase expected, Weston Sales & Service, 5536 Penn Ave., will move its service department to another building and expand sales facilities to cover the area formerly occupied by the service department, reports R. B. Weston.

Members of the Refrigeration Equipment Wholesalers Association

**Your refrigeration parts and supply house in Central New York and Northern Pennsylvania**

CENTRAL SERVICE SUPPLY

647 S. Warren Street, Syracuse, N. Y. Phone 5-4000 & 3-0313
209-211 Jefferson Ave., Scranton, Pa. Phone 3-4000

**BULLETIN!**

AIR CONDITIONING & REFRIGERATION NEWS announces the first subscription rate change in over ten years. Effective October 1, 1947, the basic subscription rates will be as follows:

1 year .....$5.00
2 years .....$8.00
3 years .....$11.00

Foreign postage $2.00 per year extra: includes all except Pan-American Postal Union countries, Canada, and U. S. Possessions.

You are invited to enter your new or renewal subscription order now if you want to save an extra dollar.

✦ ✦ ✦

New special group rates will be:

1 to 4 one year subscriptions.....$5.00 each
5 to 9 " " " .....$4.00 "
10 to 19 " " " .....$3.50 "
20 to 49 " " " .....$3.00 "
50 or more " " " .....$2.50 "

AIR CONDITIONING & REFRIGERATION NEWS, 450 W. FORT ST., DETROIT 26, MICH.

# CLASSIFIED ADVERTISING

RATES for "Positions Wanted" $2.50 per insertion. Limit 50 words.

RATES for all other classifications $5.00 per insertion. Limit 50 words.

ADVERTISEMENTS set in usual classified style. Box addresses count as five words, other addresses by actual word count.

### POSITIONS WANTED

REFRIGERATION SERVICE trainees: Graduates of intensive 8 month course on commercial and domestic refrigeration servicing desire on-the-job training willing to go anywhere in the United States. For further information write William B. Arpe, Placement Manager, MASS. TRADES SHOPS SCHOOL, 271 Huntington Ave., Boston 15, Mass.

REFRIGERATION AND AIR CONDITIONING engineer, 20 years experience designing, erecting, service management and selling, desires position with established firm in southern, central or western states. Straight salary or commission and salary. Present salary $6,000 per year. Address, ENGINEER, BOX 825, Cocoli, Canal Zone.

YOUNG EXECUTIVE wants position as store manager for dealer of domestic and commercial refrigeration and air conditioning. Twelve years experience in management, sales, advertising, warehousing, and service. Excellent references. In or near Detroit preferred. BOX 2454, Air Conditioning & Refrigeration News.

### POSITIONS AVAILABLE

SALES MANAGER—State of Maine distributor for leading lines of commercial refrigeration, selling through approximately seventy-five dealers, has attractive opening for experienced Sales Manager with technical refrigeration background. Car essential. Must be good closer. MAINE INDUSTRIES COMPANY, 40 Columbia Street, Bangor, Maine.

REFRIGERATION APPLICATION—Sales Engineer—Position with fast growing refrigeration and air conditioning equipment manufacturer. 5 to 50-H.P. condensing units. Unusual opportunity for man with refrigeration sales experience and training, between ages of 28 and 35. Give full details, salary desired, etc. SALES MANAGER, 1016 E. Columbia, Evansville, Indiana.

WANTED: SALESMEN calling on refrigeration service shops can add substantially to their income by selling washing machine parts for an established parts jobber, commission basis. Our men earn $150 to $300 per month extra. We train you, supply catalogs and price lists. BOX 2449, Air Conditioning & Refrigeration News.

REFRIGERATION ENGINEER: With practical commercial experience in refrigeration design, coil application, estimating and refrigeration service. Permanent, steady employment, with advancement on basis of individual effort, capacity and attainment; with an established midwest commercial refrigerator manufacturer. State educational background, employment record, age, marital status and starting salary. BOX 2451, Air Conditioning & Refrigeration News.

SERVICE-INSTALLATION engineer, 25 to 35 years; minimum 5 years' experience Air Conditioning & Refrigeration installations, 5 to 60 tons. Full responsibility service and installation assured department of General Electric Distributors, Republic of Panama. Wonderful future for right man in long established concern. Enclose picture. BOX 2456 Air Conditioning & Refrigeration News.

SERVICE MEN: air conditioning contractor requires several competent men to service and install 3 to 300 ton "Freon" jobs in vicinity of Miami, Florida, year round season starting Sept. 15 to Oct. 15. Write stating full qualifications. BOX 2458, Air Conditioning & Refrigeration News.

SALES ENGINEER — college graduate must have complete knowledge and experience in air conditioning and refrigeration. Experience must include actual installation, estimate, and sales. Written applications giving full details as to experience, age, salary, etc. BOX 2459 Air Conditioning & Refrigeration News.

SALES MANAGER—Commercial refrigeration and air conditioning dealer in large Midwest city has opportunity with unlimited possibilities. Nationally known franchises. Salary and percentage. Furnish complete details, background and experience with recent snapshot. BOX 2463 Air Conditioning & Refrigeration News.

FACTORY AGENT, excellent opportunity, to become associated with one of the largest commercial refrigeration organizations in the East. Territories within 150 miles of New York City, as well as choice sections of the country. Ample drawing against commission. Must have car. BOX 2464 Air Conditioning & Refrigeration News.

SALESMAN—EXPERIENCED with dealer and national account following in frozen food, dairy and ice cream field to represent manufacturer of quality pre-fab low and medium temperature freeze-coolers, packaged refrig. systems, ice makers, etc., commission basis. Good territories open. Replies handled in confidence. BOX 2465 Air Conditioning & Refrigeration News.

WANTED BY old well-established manufacturer, application engineer, college graduate, with at least 5 years experience ammonia and "Freon" refrigeration and air conditioning. BOX 2467 Air Conditioning & Refrigeration News.

### EQUIPMENT FOR SALE

MOTORS AND condensing units—available at once—⅛-¼-⅓-½ Universal condensing units with or without motors. Special—six hole ice-cream cabinets with ¼ hp. Copeland units less motors $225. Also beverage coolers, beer equipment, stainless steel reach-in freezers. ALBROD CORP., 319 West 48th St., New York City 19, CI 6-9100.

222 UNIVERSAL DD33FLI condensing units without motors and controls but complete with fan, pulley and belts, $50.00 each, F.O.B. Brooklyn in lots of 10 or more. AMERICAN-MONINGER GREENHOUSE MFG. CORP., 1820 Flushing Avenue, Brooklyn, New York. EVergreen 7-4064.

FOR SALE—AC motors ½ to 3 hp. single and 3 phase. list price. Immediate delivery. EDISON COOLING CORP., 310 E. 149th St., Bronx 51, N. Y.

COMPRESSORS, CONDENSING units, new 40 HP Airtemp 7-H less condenser $1500. Trane unit water cooled complete 10 HP, $950. 7½ HP $850. 5 HP $550. Universal water 3 HP $450. 2 HP $310. 1½ HP single phase air cooled $310. New high torque motors 15 HP Century $190. 10 HP Electro $165. 15 HP starters $28. E. M. FAIRBANKS, 145-03 7th Avenue, Whitestone, L.I.N.Y. FLushing 3-8810.

QUALITY BOBTAIL fountains: reach-ins, walk-in boxes—wood, metal: dough retarders: double duty cases—stainless steel, porcelain: dairy, florist, bakery cases: ice cream hardening cabinets; thermopane frozen food cases; milk, sandwich coolers; stainless steel back bars; with machines. Equipment made to special order. FRIGITEMP CORP., 931 Bergen St., Brooklyn 16. MA 2-9093.

5-TON CARRIER Air-Conditioner complete with evaporative condenser and valves. Brand new in crate. At dealer's price. Write GENERAL RADIO & SUPPLY COMPANY, 132 West Main Street, Belleville, Illinois or phone Belleville 869.

SACRIFICING BRAND-NEW Copeland and Universal condensing units in original crates. ⅛, ¼, ⅓, ½ HP air-cooled. 1½ and 3 HP water-cooled. All priced for immediate clearance. Write or wire now. ROCHELLE REFRIGERATION COMPANY, 31 East 4th Street, New York 3, N. Y.

WALK-IN COOLERS, sectional. Kiln-dried fir throughout. 4 in. fibre glass, natural finish, $.95 per sq. ft. Beer coolers. $.85 per sq. ft. Cooler and freezer doors as low as $36.50. No extra charge for special sizes. Florist boxes. Wholesale only. MIDWEST MANUFACTURING CO., 101 Glenwood, Minneapolis 2, Minn.

1000 MOTORS, FOR sale, from stock ¾ hp.—3425 RPM— 3 ph/230 V. (Underrated—easily equal to ¾ hp.) Ballbearing, for vertical or horizontal. Enclosed Fr. ¾ in. shaft. $30 each. This rugged motor cannot burn out. (Glass insulated wire coils.) MODERN SUPPLY CO., 206 Fulton St., New York 7—CO 7-0100.

FREEZER PLATES 18" x 72" Peerless $11.00 each, 12" x 72" Peerless $8.50 each. 3 HP Curtis Water Cooled Units, complete $375.00 each. 1 HP Diceler Air Cooled Units, complete $198.00 each. RICHMOND REFRIGERATION SERVICE, INC., 765 Post Avenue, Staten Island 10, New York.

HIGH SIDE float replacements. Westinghouse 4 hole mounting—Part #2000. Westinghouse 3 hole mounting—Part #2010. Gibson Part #2020. General Electric (DR-1 & DR-2)—Part #2030. General replacement—Part #2040. $4.75 each. Write for sealed unit parts bulletin #14. SEALED UNIT PARTS CO., 3097 Third Ave., New York 56, N. Y.

SEALED CROSLEY TERMINALS. Installed from the outside in a few minutes without opening the compressor. Corrects leaky terminals on all Crosley "F-12" units. Set of three $5.25 (Part No. 1020). Installation tool $.20. Immediate delivery. Money-back guarantee. SEALED UNIT PARTS CO., 3097 Third Ave., New York 56, N. Y.

HOME FREEZERS—12 cu. ft.—Nationally advertised brand, less refrigerating unit—$165.00. ¼ HP. AC refrigerating unit—$62.50—priced to sell with cabinet. All prices net—FOB Kansas City, Missouri. 10% with order—Balance s/d/b/l. WESTPORT REFRIGERATION COMPANY, 2605 Ban Brunt, Kansas City, Missouri.

½ HP UNITS complete with motor, $98.50. Other models from ¼ HP to 1 HP at new low prices. All units supplied with motors. Send for catalog 742A. BOX 2405 Air Conditioning & Refrigeration News.

IMMEDIATE DELIVERY: New Gemco or Typhoon 5-ton air conditioning unit $1100.00; ¼, ⅓, ½, ¾ HP condensing units; 6-hole ice cream cabinets $135; Bev-food 14 cu. ft. refrigerator-beverage cooler $200 less unit; reach-in refrigerators, freezers, display cases. BOX 2433 Air Conditioning & Refrigeration News.

SURPLUS STOCK—display & closed top low temperature cabinets. Standard manufacture—sizes 4.5 to 21 cu. ft. Stainless steel delicatessen & dairy cases. Complete with coils—sizes 6'—8'—10' & 12' lengths. Beverage coolers—with or without units. Prices below cost. Reply BOX 2445 Air Conditioning & Refrigeration News.

### FRANCHISES WANTED

MANUFACTURERS REPRESENTATIVE organization selling to dealers and chains only, are seeking quality line of commercial refrigerator equipment for Eastern territory. Primarily interested in refrigerator cases, coolers, fountain equipment, etc. Product must bear thorough quality inspection, for consideration. All correspondence confidential. REFRIGERATED EQUIPMENT SALES, 85 Liberty St., New York, N. Y.

ATTENTION MANUFACTURERS—let us represent you in the Carolina's, Georgia, Florida. We are well acquainted with all jobbers, distributors, and dealers in area. Three high type, capable salesmen will represent you. References furnished. We invite your questionnaire or personal visit. S & K COMPANY, Manufacturers Agents, 1323 Lady Street, Columbia, South Carolina.

### FRANCHISES AVAILABLE

A FEW dealerships available. Warren controlled quality commercial refrigerators. Display cases, beverage coolers, walk-in refrigerators, reach-in refrigerators, open-type refrigerated cases, and other commercial items. Write factory. THE WARREN COMPANY, INC., P.O. Box 1436, Atlanta 1, Georgia.

### BUSINESS OPPORTUNITIES

PAY CASH for commercial refrigeration or air conditioning sales or service business in New York Metropolitan area. Full details in first letter. BOX RC 1247, 113 W. 42 St., New York 18.

FOR SALE: Twenty-five years established business in Florida for store and meat market equipment, best lines of commercial refrigerators. Stock about $75,000, doing more than $250,000 a year, profit over $30,000 a year. 125 feet front with 8,000 square feet of floor space. Will sell at invoice price. Want to retire. BOX 2468 Air Conditioning & Refrigeration News.

REFRIGERATION SERVICE well established, good stock of motors, compressors and service parts. Well equipped shop. 1 good service truck, plenty of work. Reasonable rent. Will sell for inventory plus $500.00. Will take about $5,000.00 to handle. Located 1 mile north of Detroit. BOX 2469 Air Conditioning & Refrigeration News.

Distributors Refrigeration—Heating Parts & Supplies. Par Condensing Units.

All Available Material In Stock.

*Automatic*
**HEATING & COOLING SUPPLY**
DIVISION OF WEIL-McLAIN COMPANY
647 W. Lake St., Chicago 6, Ill.
Branch—809 West 74th St,., Chicago, Ill.
*Catalog Mailed On Request.*

NIBCO WROT

AND CAST

VALVES AND FITTINGS

*for Refrigeration*

NORTHERN INDIANA BRASS CO.
ELKHART, INDIANA

**AVAILABLE AT COST!**
**NEW, CARRIER REFRIGERATION UNITS**

Built to U. S. Navy specifications for hot tropical conditions.

Wide Range of Utility:
- Frozen Food Storage
- Sharp Freezing
- Fresh Meat Storage
- Ice Storage
- Air Conditioning, etc.

All units in original packing

**Refrigeration Sales & Service**
57 Spring Street, Rochester 8, N. Y.

# APC Groups Reconditioned Refrigerators In 5 Price Categories To Aid Turnover

NEW YORK CITY—Alert dealers are finding 4 to 5-cu. ft. reconditioned refrigerators a fast moving item today, Appliance Production Corp. here contends in promotion pieces it is now distributing.

To support this claim, the young reconditioning organization includes in the mailing material a reproduction of a reconditioned-refrigerator advertisement run earlier this year in a local newspaper by Spear's department stores. A notation above the advertisement states that almost 100 boxes were sold on the first day of sales.

The advertisement listed prices ranging from $99.50 for unnamed units to $179.95 for Crosley Shelvadors. Norge refrigerators were priced at $139.95 and Spartons at $119.95. All boxes were of 4-cu. ft. capacities, would be delivered and installed free in Manhattan, the Bronx, and Brooklyn, and were guaranteed for six months, according to the copy.

The firm, which occupies the entire building at 59 Crosby St., has priced its units according to groups. A recent order form announced the following groups and their prices (net and f.o.b. New York), noting that most of the units are 4 to 5 cu. ft.:

Group 1—Apex, Copeland, Dayton, Gibson, Majestic, Federal (models generally 1932 to 1935), $55.

Group 2—Sparton, Trukold, Coldspot, Mayflower, Montgomery Ward, etc. (models generally 1932 to 1935), $65.

Group 3—Kelvinator, Leonard, Hotpoint, Westinghouse, General Electric, Stewart Warner, Frigidaire, Norge, Crosley (models generally 1932 to 1935), $90.

Group 4—Kelvinator, Leonard, Hotpoint, Westinghouse, General Electric, Stewart Warner, Frigidaire, Norge, Crosley (models generally 1936 to 1938), $105.

Group 5—Kelvinator, Leonard, Hotpoint, Westinghouse, General Electric, Stewart Warner, Frigidaire, Norge, Crosley (models generally 1939 to 1941), $130.

Most units passing through the APC plant are said to fall into group three or four.

Refrigerators sold in metropolitan New York carry the regular 90-day warranty, the company states. Those sold outside of New York are guaranteed running and freezing when they leave the factory. In addition, APC grants a $5 service discount to enable the purchaser to assume the guarantee locally.

The company will arrange for door-to-door delivery on orders of 10 or more units. Truck deliveries can be arranged also directly to the point of installation.

Terms are net, with check or cash and trade and banking references required on new accounts.

As reported in the April 21 issue of the NEWS, APC buys traded-in refrigerators from appliance retailers on a wholesale basis and reconditions them for sale in areas where a market exists, particularly in the south and midwest. Twenty mechanics completely reprocess the boxes, replacing every part and unit if necessary.

APC is now reconditioning both electric and gas models.

## *N. W. Cooper Gets Sales Post at Mueller Brass*

ST. LOUIS—Appointment of Norman W. Cooper as sales representative of the Mueller Brass Co., working out of the company's office here, has been announced by the firm. Mr. Cooper will serve as assistant to E. H. Joern, office manager, the company said.

**N. W. Cooper**

Prior to his five years service in the army, Mr. Cooper had gained considerable wholesaler experience handling brass and copper products for refrigeration, air conditioning, plumbing, and heating applications, the company stated.

Three years of Mr. Cooper's army life was spent overseas as a sales and procurement officer in the Quartermaster Corps, it added.

## *Stand-By Refrigeration Unit Sought for Buffalo Auditorium*

BUFFALO—Bids for construction of auxiliary refrigeration machinery in Memorial Auditorium were received and referred to the Common Council. Low bid was $51,962, submitted by the Mollenberg-Betz Machine Co.

David J. Mahoney, chairman of the auditorium board, said auxiliary refrigeration machinery is needed because the city would face a possible law suit if equipment should break during an ice show.

## Ballroom To Be Air Cooled

BINGHAMTON, N. Y.—The main ballroom of the Arlington hotel here will be air conditioned soon.

## Kelvinator Issues First Postwar Supplies Catalog

DETROIT—A new 88-page refrigeration supplies catalog for use by service contractors, dealer service organizations, and ice cream and bottle beverage manufacturers has been published by the Kelvinator Division of the Nash-Kelvinator Corp.

The new catalog, attractively printed in two colors and featuring the use of large, clear, product illustrations, is the first catalog issued by the company in the postwar period and incorporates the many new lines of refrigeration supplies added by Kelvinator in recent months. In addition to recognized lines of refrigeration supplies, the complete line of Kelvinator-made parts including compressors, stainless steel evaporators, driers, and component parts for condensing units are shown.

Among the features of the catalog which make it convenient for the customer to use is a quick reference index guide, sectional grouping of products according to type and uniform grouping of part numbers, specifications, and prices. Complete "How to Order" information as well as several reference tables and charts of value to refrigeration servicemen are also included.


GOLD SEAL REFRIGERATION, INC.

*Announces the New*

10 CU. FT. REACH-IN FREEZER

- 4 inches cork insulation
- Heavy Gauge Steel
- Baked White Enamel
- 3 Freezer Shelves
- ¼ Horse Jack & Heintz Condensing Units
- Heavy Hardware
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Refrigeration manufacturers—and refrigeration service men—demand refrigeration controls that provide trouble-free service under the most exacting conditions. With more Ranco Refrigeration Controls in use than any other make, your logical choice is Ranco precision-built refrigeration controls.

Your Ranco wholesaler is ready to serve you; ask him for complete information or write direct to Ranco Inc.

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*World's Largest Manufacturers of REFRIGERATION CONTROLS*

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*Two Types*

STANDARD MODEL *for* NORMAL TEMPERATURES +34° to +50°

THERMOBANK MODEL *for* FREEZING TEMPERATURES +34° to Minus 20°

*WRITE FOR BULLETINS R106 and R123*

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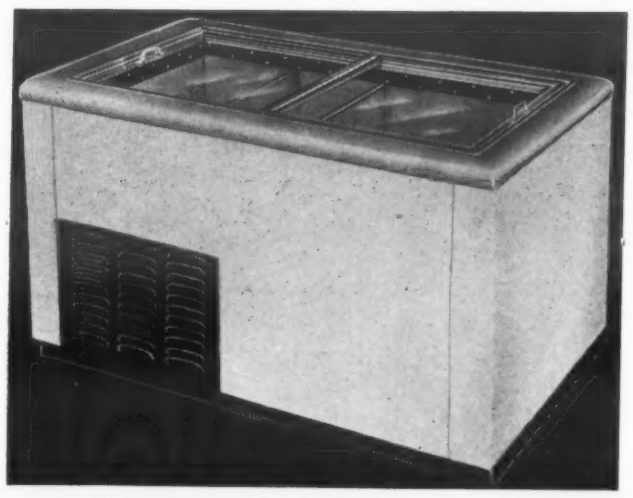
A SMALL BOX - *with all* THE BIG FEATURES



Short of space? Here's a box especially designed for the "small volume" frozen food retailer. Compact—yet packed with all the features of a large cabinet, this box is short in size, long in quality and construction.

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- ★ MAINTAINS ICE CREAM TEMP.
- ★ IMMEDIATE DELIVERY

*Write for full details*

Distributed by SUPER COLD NEW YORK CO., INC. 32-27 QUEENS BLVD. L. I. C. NEW YORK

## Cat Keeps Cool While Bankers' Dispute Becomes Heated

ALBANY, N. Y.—This is the tale of a big gray cat who likes to hang around banks most of the time but prefers air conditioned ones when it's hot—a preference which recently touched off a heated argument between two neighboring financial institutions here.

It all started one torrid day when the cat—Tommy by name—sneaked into the City & County Savings Bank through the revolving door, jumped up onto a shiny mahagony table, and lay there panting.

Joseph A. Ehrhardt, the secretary-treasurer, took one look at Tommy and grabbed the telephone.

"The National Saving Bank's tomcat has just come over to our air conditioned bank to get cool," he gleefully told *The Knickerbocker News*, explaining that National is not air conditioned. He added that his bank sometimes "drafts the cat from off the street to catch mice in our paper room" and that "he's an excellent ratter."

It wasn't long before the news reached the ears of Treasurer Albert E. Stuart in the National bank next door.

"It's not our cat," he protested vehemently. "It's not a tom cat but a neuter cat. We don't have air conditioning here but we don't need it because we have so many windows to open and so many fans."

Furthermore, declared Mr. Stuart—a self-styled connoisseur of cats—Tommy belongs to no one. He's just a cosmopolitan State St. wanderer.

"When he needs a haircut he drops in on a barber, when he gets hungry he goes to a restaurant, and when he feels in a gentlemanly mood he drops into our bank as into a club.

"Besides," Mr. Stuart scoffed, "we don't have any rats or mice in our bank and when he comes here he doesn't have to work."

Tommy lay blinking and cooling himself on City bank's table through it all.

AIR CONDITIONING condensers and coolers designed and built FAST

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DRINKING WATER SPECIALISTS FOR 50 YEARS

## ASRE Booklet Describes Use of Air Conditioning In Candy Manufacture

NEW YORK CITY—The general principles and techniques of air conditioning as applied to candy manufacture are described in a pamphlet "Air Conditioning In Candy Manufacture" Refrigerating Engineering Application Data 39, issued recently by the American Society of Refrigerating Engineers, 40 West 40th St., here.

The candy industry has found the control of temperature and humidity to be an essential part of most of its manufacturing operations and through the use of air conditioning and refrigeration, changing atmospheric conditions and their adverse effect on production have been completely eliminated. The pamphlet tells how properly to apply air conditioning and refrigeration to control the many phases of candy manufacture.

AD 39 was prepared by H. C. Hoffmann, who for the last 10 years, has been designing, supervising, and installing air conditioning and refrigeration for Carrier Corp.

The pamphlet contains information on cooling tunnels, cold rooms, hot rooms, revolving coating kettles, methods of supplying refrigeration, and miscellaneous operations of candy manufacture. Priced at 20 cents, it may be obtained from ASRE.

## Auchenbach Named Ludlow Chief Engineer

BINGHAMTON, N. Y. — Carl W. Auchenbach of Reading, Pa. has been named chief engineer of the Ludlow Temperature Control Corp., it was announced by Harold V. Ludlow, president.

A graduate of Penn State Extension School and the John Hopkins School of Marine Refrigeration, Baltimore, Mr. Auchenbach has been associated with air conditioning companies in Reading since 1932.

He was employed as application engineer for Chrysler products with the Wertz Engineering Co., Reading, before the war. The new company, which will begin operations about Sept. 1, will distribute Chrysler products in the heating, air conditioning, and commercial refrigeration fields through an eight-county area.

## Eventoff, Goodman, Sobel Get Posts at Evans Mfg.

MT. VERNON, N. Y.—Assignment of export and sales promotion to Joseph Eventoff and David Goodman and appointment of Frank Sobel as production manager are announced by Evans Mfg. Corp. here, producer of commercial and industrial refrigeration fixtures.

Mr. Sobel and Mr. Goodman were formerly associated with Wilson Freezer Co. and Coldin Cabinet Co., New York. Mr. Eventoff just completed 12 years in sales promotion with Cordell Refrigeration Co.

The company said better delivery of its dairy and show cases by next January seems assured by the addition of 5,000 sq. ft. to the plant area.

## Liquid Carbonic Profit Hits $1,275,206 for 6 Months

CHICAGO—Liquid Carbonic Corp. here has reported a net profit of $1,275,206, equal to $1.49 per common share for the six months period ended June 30. This was in contrast to a net loss of $274,420 for the same period in 1946.

Net sales were $26,933,056 against $15,454,089 for last year's period.

The June quarter showed a net profit $824,110 compared to $385,000. Sales for the quarters were $11,127,799 against $6,318,663 respectively.

## Pittsburgh Service Firm Builds

PITTSBURGH—Gaus & Casey at 900 Madison Ave., is erecting a one-story cement block building on Peralto Street to house the firm's entire servicing facilities.

Firm's present office is across the street from its shop. Gaus & Casey contracted for wholesaler Ludwig Hommel's Norge service work in 1940. Partners are John S. Gaus and Frank T. Casey.

## Neb. Power Officials Eye Voluntary Cut In Air Conditioning If Drought Continues

LINCOLN, Neb. — Voluntary rationing of electricity for such uses as air conditioning was said to be an imminent possibility by Nebraska public power officials, as a prolonged hot and dry spell the first half of August placed an unusually heavy load on the power supply.

The rapid increase in the use of mechanical air conditioning systems and pump irrigation was said to be largely responsible for the critical power situation, but officials also pointed out that increased power use in the home and on the farm as rural electrification expands, and food processing, which includes such relatively new developments as expanding freezer locker use, have contributed to the demand.

Not counting the western system of Consumers Public Power district, the state was dangerously close to using its maximum power capacity in August. This maximum capacity includes little-used obsolete equipment only recently pressed into service.

R. D. McWha, Nebraska Public Power system western division operating manager, and chairman of a special power supply committee named by the hydros earlier this year, said that if the water flow continues to drop off in the Loup river, reducing the peaking capacity of the Columbus plant, there is "a possibility we may have to schedule air conditioning first and pump irrigation second."

The three-days' notice of the rationing could come at any time, he said. With a total capacity of 158,000 kilowatts, the Nebraska power system which is made up of the three hydro districts in the state, has been within 1,000 kilowatts of capacity during recent hot-weather peaks.

## Marshall Field Jingles Promote Air Conditioning

CHICAGO—Perspiring Chicagoans walking along the State St. side of Marshall Field & Co.'s department store here recently read "poetic" enticements to step inside and shop in the coolness provided by air conditioning.

The firm turned over six windows to a display of the lyrical lures, each cleverly illustrated by cartoons. One of them went like this:

Though an ice cold drink's refreshing,
When the mercury hits the top,
Our air conditioning systems,
Will cool you while you shop.

Another jingle read:

Though a fan when wielded briskly,
Stirs up cooling puffs of air,
Our air conditioning system,
Will make shopping free from care.

A third told shoppers:

Though a parasol's quite pleasant,
For beach or garden spot,
With our air conditioning system,
You'll shop—forget it's hot.

## Nelson Appointed--

*(Concluded from Page 1, Column 5)*

is being transferred to Grand Rapids Brass and its plumbing hardware division to the parent company.

Grand Rapids Brass Co.'s plant of 119,000 sq. ft. of floor space has been provided with new equipment throughout and improved handling and production facilities, the announcement said.

Mr. Nelson left Leonard Division of Nash-Kelvinator Corp. in 1930 to join Winters & Crampton as a salesman. In 1934, he became sales manager of Grand Rapids Brass, where he remained until 1937 when he was made general manager of Bohn Refrigerator Co., Baltimore. Two years later he rejoined Winters & Crampton in the sales department and in 1941 was named vice president in charge of sales.

G. Harry De Graff continues as sales manager of Grand Rapids Brass and Thomas Pike as general superintendent.

Herman E. Pleasant is president and general manager of the parent concern (Crampton Mfg. Co.), E. P. Schneider is secretary-treasurer, and M. E. Davis, vice president and works manager.

## Trane Reports Net Income Of $1,162,821 for 6 Mos.

LA CROSSE, Wis.—Trane Co. here has reported a net income of $1,162,821 or $3.88 per common share for the last six months. Net sales were $10,193,785.

Figures for the same period last year were: income $284,222, and net sales of $5,461,957.

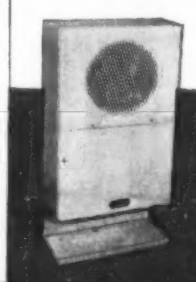
McQUAY DUAL PURPOSE UNIT COOLER

Here's a unit to match any cooling specification

DESIGNED to maintain precise temperature control at any point in the 0° to 37° F. range, the McQuay dual purpose unit cooler has built-in flexibility to match your cooling specifications. Rugged construction plus sound engineering assure dependable operation in all refrigeration applications.

Heart of the unit is the famous McQuay Ripple Fin Coil with its rippled fins and rippled tubes. Hydraulic expansion locks tubes in wide spun fin collars for permanent metal-to-metal contact. Fin construction means high heat transfer efficiency . . . extra coil strength. Unit features include three-way air deflection, slotted hangers for easy installation and water defrosting.

The advantages of water defrosting are now brought in the McQuay Unit Cooler, to all installations from the 0° to 10° range up to the 30° to 37° range where the removal of odors is a problem. Washing of the coil during periodic or daily defrosting provides positive action in elimination of odors that accumulate in the cooling or chill room. See your refrigeration wholesaler now or write McQuay, Inc., 1607 Broadway Street Northeast, Minneapolis 13, Minnesota. Representatives in principal cities.



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EVERY PHASE OF AIR CONDITIONING